

2-17 Number of Telephone Lines Experienced same Type of Fault more than 2 Times in the same Month in the BMA (4/10) (Inside Wire Fault)

Area Code	Number of Fault occurred more than 2 Times in One Month (Fault caused of Inhouse Wire)												Source : Monthly Report by Maintenance Center, TOT											
	1990 3	1990 4	1990 5	1990 6	1990 7	1990 8	1990 9	1990 10	1990 11	1990 12	1991 1	1991 2	1991 3	1991 4	1991 5	1991 6	1991 7	1991 8	1991 9	1991 10	1991 11	1991 12	1992 1	1992 2
1	11	4	8	8	5	4	8	7	2	2	5	1	5	3	7	6	1	4	4	12	4	1	5	3
1	2	4	3	6	2	1	9	4	15	9	15	12	7	9	22	9	14	8	4	9	7	4	11	4
1	3	8	6	4	11	6	11	3	12	7	6	9	6	4	9	4	11	8	17	9	5	6	11	6
1	4	4	6	7	9	5	2	6	5	5	1	4	3	2	4	5	0	1	6	6	3	1	2	2
1	5	1	0	0	0	1	1	0	3	2	2	0	0	1	1	1	1	0	1	1	0	1	1	1
1	6	4	1	2	3	3	0	1	5	0	1	2	0	4	1	0	2	0	1	2	1	1	2	2
1	7															0	0	0	0	0	0	1	0	2
1	Total	32	20	27	33	20	27	22	47	25	21	35	21	23	44	25	29	21	33	39	20	15	32	20
2	1	0	0	0	2	2	2	0	1	0	2	1	2	3	0	3	0	1	0	4	0	0	1	1
2	2	0	1	3	3	1	1	5	0	0	1	0	2	0	2	1	1	1	0	1	0	0	0	0
2	3	1	0	6	4	3	4	2	5	2	3	2	0	1	0	2	0	5	2	2	2	0	2	1
2	4	0	2	3	2	1	2	6	7	1	1	1	0	0	1	0	1	0	1	0	1	0	1	0
2	5	0	2	1	2	2	5	2	1	4	0	2	0	1	0	1	0	0	0	1	0	0	1	0
2	6	1	2	3	6	1	2	3	4	1	2	2	3	1	0	0	1	1	0	3	1	0	1	0
2	7															0	2	0	0	3	1	0	0	1
2	8															0	0	0	0	0	0	0	0	0
2	9															0	1	1	0	1	0	0	2	1
2	10															1	4	1	4	1	1	0	1	0
2	Total	4	6	14	17	12	16	14	23	8	8	9	5	8	5	13	5	12	8	13	2	4	8	3
3	1	0	5	3	0	5	4	4	1	2	2	2	1	2	3	1	0	0	1	0	0	0	0	0
3	2	0	0	1	0	0	0	0	2	0	0	0	0	0	3	0	0	1	1	2	1	2	0	0
3	3	2	1	4	5	4	4	7	0	0	2	1	4	3	3	0	2	2	3	4	1	1	2	3
3	4	2	0	1	1	1	2	5	3	4	0	1	0	1	0	1	2	1	1	2	0	2	2	0
3	5	2	1	2	1	1	1	0	5	1	0	2	0	1	0	2	2	1	0	1	0	1	0	1
3	6	0	1	0	1	1	1	2	1	2	1	1	0	3	2	1	1	2	1	0	0	1	0	1
3	7															0	1	0	1	0	0	1	0	0
3	8															1	0	4	0	1	1	0	0	0
3	Total	7	3	12	12	7	13	15	20	10	3	8	3	10	7	14	7	6	10	8	10	3	6	6
4	1	1	5	4	7	1	3	3	4	2	1	0	3	2	1	1	3	6	1	1	3	4	0	2
4	2	26	2	1	2	8	3	5	1	1	3	2	4	5	4	14	5	4	6	6	5	2	1	0
4	3	9	4	8	10	6	8	5	10	3	3	4	2	2	6	2	5	2	7	2	3	1	3	0
4	4	2	1	0	1	3	2	2	7	3	0	3	1	2	1	1	2	2	4	4	4	1	4	2
4	5	4	0	1	1	4	2	2	4	2	1	1	0	0	3	8	3	3	1	4	3	0	1	4
4	6	1	1	2	2	1	5	5	1	1	0	0	2	2	2	5	2	1	4	6	1	1	1	2
4	7															1	1	0	0	0	0	1	0	0
4	8															0	0	2	3	4	0	1	0	3
4	9															5	1	4	6	6	3	3	1	1
4	Total	43	13	16	23	23	23	22	31	12	9	10	11	13	14	23	32	18	33	27	33	15	17	14

2-17 Number of Telephone Lines Experienced same Type of Fault more than 2 Times in the same Month in the BMA (S/10) (Inhouse Cable Fault)

Area Code	Number of Fault occurred more than 2 Times in One Month (Fault caused of Inhouse Cable)												Source : Monthly Report by Maintenance Center, TCF												
	1990 3	1990 4	1990 5	1990 6	1990 7	1990 8	1990 9	1990 10	1990 11	1990 12	1991 1	1991 2	1991 3	1991 4	1991 5	1991 6	1991 7	1991 8	1991 9	1991 10	1991 11	1991 12	1992 1	1992 2	
1	2	0	0	0	2	0	0	3	1	0	0	0	2	0	0	3	0	0	0	0	2	2	1	1	1
1	2	3	7	17	13	21	8	25	9	13	4	4	4	1	14	11	7	16	18	7	6	3	8	5	5
1	3	4	2	7	4	3	4	2	3	0	1	1	1	2	4	4	7	2	7	4	4	5	3	3	3
1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	Total	9	5	9	26	17	24	12	30	13	5	5	7	3	18	18	14	18	25	13	12	9	12	9	9
2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2-17 Number of Telephone Lines Experienced same Type of Fault more than 2 Times in the same Month in the BMA (6/10) (Drop Wire Fault)

Area Code	Maintenance Section	Number of Fault occurred more than 2 Times in One Month (Fault caused of Drop Wire)												Source : Monthly Report by Maintenance Center, TOT											
		1990 3	1990 4	1990 5	1990 6	1990 7	1990 8	1990 9	1990 10	1990 11	1990 12	1991 1	1991 2	1991 3	1991 4	1991 5	1991 6	1991 7	1991 8	1991 9	1991 10	1991 11	1991 12	1992 1	1992 2
1	1	9	9	21	19	11	14	14	30	21	7	15	6	6	18	22	10	22	28	15	34	20	11	28	14
1	2	18	9	9	14	16	10	7	18	15	7	11	12	5	6	10	12	8	10	6	13	8	4	7	1
1	3	18	6	17	30	20	11	12	29	13	15	16	7	18	18	27	21	20	9	17	20	12	6	12	5
1	4	8	11	26	6	9	8	3	3	4	2	6	2	4	1	3	2	2	2	6	2	5	2	3	1
1	5	10	3	9	5	3	6	2	6	7	1	6	2	4	5	8	7	9	3	4	6	3	2	6	0
1	6	2	0	10	1	4	6	2	3	6	0	1	3	2	2	1	2	2	1	3	2	1	2	1	1
1	7																								
1	Total	65	38	92	75	63	55	40	89	66	32	55	32	39	50	71	55	64	59	47	82	47	31	53	23
2	1	7	6	6	6	3	5	4	4	2	3	2	2	4	6	3	1	2	7	2	1	0	1	1	0
2	2	9	0	26	20	17	28	14	22	15	5	7	6	7	8	8	13	10	11	4	7	3	0	3	6
2	3	63	35	89	37	74	76	104	122	81	47	46	36	73	56	41	43	37	33	20	45	58	10	12	12
2	4	18	6	13	15	18	16	6	22	19	8	12	14	8	23	9	13	5	7	6	6	5	3	2	3
2	5	7	5	18	11	12	17	7	11	10	4	6	7	8	14	9	0	7	3	4	4	3	0	2	1
2	6	6	5	6	8	8	15	5	8	5	4	1	5	2	5	4	8	1	2	4	2	1	0	5	3
2	7																								
2	8																								
2	9																								
2	10																								
2	Total	110	57	158	97	132	157	140	189	132	71	74	70	102	112	109	113	96	104	80	97	81	24	39	37
3	1	4	6	5	7	4	6	4	6	6	3	2	0	1	1	4	2	2	0	0	0	0	0	1	1
3	2	16	12	7	10	10	3	13	15	6	2	3	5	5	4	12	7	10	10	7	13	4	4	4	3
3	3	12	11	7	7	13	9	6	2	10	1	5	3	5	10	3	2	5	13	6	7	1	4	4	4
3	4	17	8	11	4	13	9	7	9	6	4	2	5	1	5	11	9	5	4	9	14	1	10	2	6
3	5	8	1	6	4	5	2	3	3	2	1	2	1	3	2	4	2	4	5	2	2	3	1	1	2
3	6	8	3	9	16	11	6	8	7	8	7	3	3	8	8	7	1	0	0	2	1	0	0	0	0
3	7																								
3	8																								
3	Total	65	41	45	48	56	35	41	42	38	18	17	17	23	30	38	40	33	35	36	40	12	21	17	18
4	1	18	15	25	21	22	19	19	29	16	13	17	18	23	26	24	31	33	22	19	21	13	13	8	10
4	2	0	11	25	19	19	29	23	20	16	23	17	12	8	16	26	24	25	26	12	15	14	12	9	11
4	3	21	8	15	9	22	12	16	26	10	5	11	6	12	8	16	12	10	8	11	6	10	6	14	9
4	4	7	3	11	8	9	14	10	12	5	4	10	2	2	4	6	3	5	11	10	10	3	4	1	2
4	5	0	4	9	13	11	12	7	8	15	5	5	3	7	10	7	1	3	5	5	8	7	1	5	7
4	6	3	6	5	5	1	8	6	12	4	4	1	3	4	2	6	3	8	8	2	7	5	4	2	2
4	7																								
4	8																								
4	9																								
4	Total	49	47	90	75	84	94	81	107	66	54	61	44	56	66	85	94	95	93	69	90	64	49	52	52

2-17 Number of Telephone Lines Experienced same Type of Fault more than 2 Times in the same Month in the BMA (8/10) (Cable Fault)

Area Code	Maintenance Section	Number of Fault occurred more than 2 Times in One Month (Fault caused of Cable)												Source : Monthly Report by Maintenance Center, TOT												
		1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991			
1	1	11	4	8	8	5	4	8	7	2	2	5	1	5	3	7	6	1	4	4	12	4	1	5	3	
1	2	4	3	6	2	1	9	4	15	9	9	15	12	7	9	22	9	14	8	4	9	7	4	11	4	
1	3	8	6	4	11	6	11	3	12	7	6	9	7	6	4	9	4	11	8	17	9	5	6	11	6	
1	4	4	6	7	9	5	2	6	5	5	1	4	1	3	2	4	5	0	1	6	6	3	1	2	2	
1	5	1	0	0	0	1	0	3	2	2	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	
1	6	4	1	2	3	3	0	1	5	0	1	2	0	0	4	1	0	2	0	1	2	1	1	2	2	
1	7																0	0	0	0	0	0	1	0	2	
1	Total	32	20	27	33	20	27	22	47	25	21	35	21	21	23	44	25	29	21	33	39	20	15	32	20	
2	1	0	0	0	2	2	2	0	1	0	2	1	1	2	3	0	3	0	1	0	4	0	0	1	1	
2	2	2	0	1	3	3	1	1	5	0	0	1	0	2	0	2	1	1	1	0	1	0	0	0	0	
2	3	1	0	6	4	3	4	2	5	2	3	2	0	0	1	0	2	0	5	2	2	0	0	2	1	
2	4	0	2	3	2	1	2	6	7	1	1	1	1	0	0	1	0	1	0	1	0	1	0	0	0	
2	5	0	2	1	2	2	5	2	1	4	0	2	0	1	0	1	0	0	0	0	0	1	0	1	0	
2	6	1	2	3	6	1	2	3	4	1	2	2	3	3	1	0	0	1	1	0	3	0	0	1	0	
2	7															0	2	0	0	0	3	1	0	0	1	0
2	8															0	0	0	0	0	0	0	0	0	0	0
2	9															0	1	1	0	0	1	0	0	2	1	1
2	10															1	4	1	4	1	1	0	1	0	0	0
2	Total	4	6	14	17	12	16	14	23	8	8	9	5	8	5	5	13	5	12	8	13	2	4	8	3	
3	1	1	0	5	3	0	5	4	4	1	2	2	2	1	2	3	1	0	0	0	1	0	0	0	0	
3	2	0	0	0	1	0	0	0	0	2	0	0	0	0	0	3	0	0	0	1	1	2	1	2	0	0
3	3	2	1	4	5	4	4	4	7	0	0	2	1	4	3	3	0	2	2	3	4	1	1	2	3	
3	4	2	0	1	1	1	2	5	3	4	0	1	0	1	0	1	2	1	1	1	2	0	2	2	0	
3	5	2	1	2	1	1	1	0	5	1	0	2	0	1	0	2	2	1	0	1	0	0	1	0	1	
3	6	0	1	0	1	1	1	2	1	2	1	1	0	3	2	2	1	1	2	1	0	0	0	1	0	
3	7															0	1	0	0	1	0	0	0	1	0	
3	8															1	0	4	0	1	1	0	0	0	0	
3	Total	7	3	12	12	7	13	15	20	10	5	8	3	10	7	14	7	6	10	8	10	3	6	6	4	
4	1	1	5	4	7	1	3	3	4	2	1	0	3	2	1	1	1	3	6	1	1	3	4	0	2	
4	2	25	2	1	2	8	3	5	1	1	3	2	4	5	4	14	5	4	6	6	5	2	1	0	0	
4	3	9	4	8	10	6	8	5	10	3	3	4	2	2	6	2	5	2	7	2	3	1	3	1	0	
4	4	2	1	0	1	3	2	2	7	3	0	3	1	2	1	1	2	2	4	4	4	1	4	1	2	
4	5	4	0	1	1	1	4	2	4	2	1	1	1	0	0	3	8	3	3	1	4	3	0	1	4	
4	6	1	1	2	2	1	5	5	5	1	1	0	0	2	2	2	5	2	1	4	6	1	1	1	2	
4	7															1	1	1	0	0	0	1	0	0	0	
4	8															0	0	0	2	3	4	0	1	0	3	
4	9															5	1	4	6	6	3	6	3	3	1	
4	Total	43	13	16	23	23	23	22	31	12	9	10	11	13	14	23	32	18	33	27	33	15	17	7	14	

2-17 Number of Telephone Lines Experienced same Type of Fault more than 2 Times in the same Month in the BMA (10/10) (PABX Fault)

Area Code	Maintenance Section	Number of Fault occurred more than 2 Times in One Month (Fault caused of PABX)												Source : Monthly Report by Maintenance Center, IOF											
		1990 3	1990 4	1990 5	1990 6	1990 7	1990 8	1990 9	1990 10	1990 11	1990 12	1991 1	1991 2	1991 3	1991 4	1991 5	1991 6	1991 7	1991 8	1991 9	1991 10	1991 11	1991 12	1992 1	1992 2
1	1	5	9	10	9	9	14	5	5	5	7	6	4	3	6	3	3	4	9	10	11	12	0	9	5
1	2	10	6	13	11	8	6	10	11	5	8	7	7	7	14	10	6	7	6	22	9	6	11	9	9
1	3	5	3	8	8	13	12	7	6	6	8	7	5	6	9	9	13	9	9	10	7	2	6	9	9
1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	Total	20	18	31	28	24	30	32	22	22	16	23	20	16	16	29	22	20	24	42	23	8	26	23	23
2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	1	9	4	12	12	15	14	8	15	12	7	13	7	14	17	14	13	9	14	11	2	1	1	1	3
3	2	0	2	4	3	4	6	6	10	2	5	7	6	3	7	8	6	6	5	3	3	2	0	0	2
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Total	9	6	16	15	19	20	14	25	14	12	20	13	17	24	22	19	15	19	14	5	3	1	1	5
4	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Total	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

2-20 Average Number of Repairs per 1,000 Lines Connected in the BMA in the Period 1991.3 - 1992.2

Source : Monthly Maintenance Report by Maintenance Center

Area Code	Maintenance Section	Total No. of Lines Connected	Subscriber Set		Inside Wire		Drop Wire		Cable		Test OK	
			Total No.	Average	Total No.	Average	Total No.	Average	Total No.	Average	Total No.	Average
1	1	519,935	96	0.2	1,429	2.7	4,795	9.2	3,512	6.8	538	1.0
1	2	539,114	105	0.2	1,871	3.5	4,067	7.5	2,055	3.8	250	0.5
1	3	539,872	148	0.3	3,160	5.9	6,685	12.4	2,296	4.3	34	0.1
1	4	368,628	90	0.2	1,737	4.7	2,976	8.1	2,402	6.5	5	0.0
1	5	287,629	12	0.0	812	2.8	2,212	7.7	1,491	5.2	1	0.0
1	6	440,880	74	0.2	1,034	2.3	1,936	4.4	1,155	2.6	57	0.1
1	7	177,639	22	0.1	531	3.0	1,148	6.5	862	4.9	36	0.2
1	Ordinary Total	2,873,697	547	0.2	10,574	3.7	23,819	8.3	13,773	4.8	921	0.3
1	PABX	342,190	16	0.0	1,677	4.9	5,485	16.0	1,718	5.0	2,578	7.5
1	Public	62,984	16,413	260.6	271	4.3	1,546	24.5	302	4.8	3,979	63.2
1	Area Total	3,278,871	16,976	5.2	12,522	3.8	30,850	9.4	15,793	4.8	7,478	2.3
2	1	280,571	258	0.9	1,101	3.9	1,031	3.7	460	1.6	76	0.3
2	2	255,031	173	0.7	1,062	4.2	1,238	4.9	1,276	5.0	138	0.5
2	3	332,343	186	0.6	804	2.4	5,062	15.2	2,967	8.9	1,214	3.7
2	4	462,325	459	1.0	937	2.0	2,415	5.2	2,478	5.4	1,005	2.2
2	5	498,450	228	0.5	1,138	2.3	2,099	4.2	1,763	3.5	59	0.1
2	6	255,580	175	0.7	1,021	4.0	622	2.4	896	3.5	70	0.3
2	7	326,464	276	0.8	853	2.6	2,865	8.8	3,659	11.2	314	1.0
2	8	234,324	290	1.2	377	1.6	1,024	4.4	721	3.1	127	0.5
2	9	180,082	238	1.3	703	3.9	1,537	8.5	1,813	10.1	220	1.2
2	10	271,197	186	0.7	999	3.7	938	3.5	623	2.3	48	0.2
2	Ordinary Total	3,096,367	2,469	0.8	8,995	2.9	18,831	6.1	16,656	5.4	3,271	1.1
2	PABX	165,025	230	1.4	8	0.0	3,499	21.2	1,331	8.1	1,950	11.8
2	Public	46,678	17,621	377.5	0	0.0	2,254	48.3	308	6.6	408	8.7
2	Area Total	3,308,070	20,320	6.1	9,003	2.7	24,584	7.4	18,295	5.5	5,629	1.7
3	1	335,203	324	1.0	1,238	3.7	1,415	4.2	1,306	3.9	9	0.0
3	2	488,255	611	1.3	1,292	2.6	3,764	7.7	2,256	4.6	218	0.4
3	3	308,016	248	0.8	1,824	5.9	3,613	11.7	3,138	10.2	80	0.3
3	4	254,533	30	0.1	1,506	5.9	3,417	13.4	2,527	9.9	16	0.1
3	5	403,071	770	1.9	1,377	3.4	2,247	5.6	1,416	3.5	567	1.4
3	6	276,302	761	2.8	1,092	4.0	1,510	5.5	1,194	4.3	17	0.1
3	7	148,213	234	1.6	492	3.3	1,259	8.5	1,500	10.1	55	0.4
3	8	161,076	120	0.7	792	4.9	1,283	8.0	1,461	9.1	11	0.1
3	Ordinary Total	2,374,669	3,098	1.3	9,613	4.0	18,508	7.8	14,798	6.2	973	0.4
3	PABX	55,514	1	0.0	0	0.0	8	0.1	393	7.1	35	0.6
3	Public	39,235	12,920	329.3	7	0.2	17	0.4	169	4.3	57	1.5
3	Area Total	2,469,418	16,019	6.5	9,620	3.9	18,533	7.5	15,360	6.2	1,065	0.4
4	1	331,358	121	0.4	1,748	5.3	6,024	18.2	615	1.9	2,493	7.5
4	2	435,733	95	0.2	2,894	6.6	3,550	8.1	956	2.2	3,413	7.8
4	3	551,389	155	0.3	2,695	4.9	4,322	7.8	604	1.1	4,080	7.4
4	4	394,882	156	0.4	1,853	4.7	2,998	7.6	607	1.5	2,943	7.5
4	5	325,864	110	0.3	1,769	5.4	2,378	7.3	852	2.6	4,099	12.6
4	6	366,699	67	0.2	2,049	5.6	2,710	7.4	629	1.7	2,757	7.5
4	7	199,619	51	0.3	620	3.1	1,156	5.8	334	1.7	1,277	6.4
4	8	172,263	42	0.2	882	5.1	1,583	9.2	347	2.0	1,450	8.4
4	9	348,350	111	0.3	1,976	5.7	2,769	7.9	745	2.1	2,608	7.5
4	Ordinary Total	3,126,157	908	0.3	16,486	5.3	27,490	8.8	5,689	1.8	25,120	8.0
4	PABX	98,281	5	0.1	1	0.0	2,100	21.4	218	2.2	794	8.1
4	Public	48,284	18,365	380.4	0	0.0	1,974	40.9	103	2.1	3,163	65.5
4	Area Total	3,272,722	19,278	5.9	16,487	5.0	31,564	9.6	6,010	1.8	29,077	8.9
BMA Total		12,329,081	72,593	5.9	47,632	3.9	105,531	8.6	55,458	4.5	43,249	3.5

2-21 Number of PABX Faults by Cause in the BMA

BMA	Cause of PABX Fault	Source : Monthly Maintenance Report by PABX Division																
		1990	1990	1990	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992
	Cause	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
1	TOK	560	223	192	185	133	182	199	223	211	204	198	211	237		114	230	170
	Customer Premise	1018	821	612	764	660	664	787	1082	993	813	915	879	966		437	688	627
	Drop Wire	352	279	161	175	153	189	218	226	360	248	253	282	292		146	146	167
	Inside Wire	47	57	41	34	32	30	46	32	16	20	14	54	56		24	49	21
	Extention	80	57	38	47	37	44	43	44	68	31	24	40	51		20	34	33
	Cabine Jumper	37	32	25	29	38	37	28	42	31	58	43	80	51		57	36	36
	Cable (not repair)	286	257	179	161	161	187	210	316	329	309	294	175	211		131	178	142
	Subcarrier(repair single only)	0	4	0	0	0	0	0	0	0	0	0	0	5		0	0	0
	Exchange(not repair)	6	18	18	8	16	26	36	48	31	14	45	5	11		15	0	14
	PCM Junction(not repair)	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
	Others	50	58	18	107	25	41	29	29	85	55	32	38	38		11	20	57
	Total	2436	1806	1284	1510	1255	1400	1596	2042	2124	1752	1818	1764	1918		955	1381	1267
2	TOK	317	212	147	254	181	274	220	265	245	253	279	288	292	218	208	233	227
	Customer Premise	209	178	143	182	155	183	191	347	265	290	206	287	345	141	181	211	214
	Drop Wire	446	385	262	380	302	355	422	407	479	345	402	330	301	99	214	366	231
	Inside Wire	201	99	65	103	124	86	159	203	199	192	212	160	124	187	126	166	157
	Extention	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cabine Jumper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cable (not repair)	121	133	76	112	78	111	133	171	139	80	169	70	153	107	94	141	103
	Subcarrier(repair single only)	31	12	16	56	38	20	19	22	13	18	48	10	12	11	2	21	9
	Exchange(not repair)	1	1	0	4	0	1	0	0	1	0	13	1	0	2	11	5	2
	PCM Junction(not repair)	3	0	0	0	0	68	0	0	0	0	0	0	0	0	0	0	0
	Others	199	57	52	70	97	0	113	114	64	51	67	13	13	0	0	53	24
	Total	1528	1077	761	1161	975	1098	1257	1529	1405	1229	1396	1159	1240	765	836	1196	967
3	TOK	397	232	172	202	134	259	295	253	247	237	291	210	200	170	92	135	112
	Customer Premise	133	82	67	64	90	120	95	81	88	113	140	157	192	175	108	130	124
	Drop Wire	251	170	117	176	145	177	248	251	206	171	182	188	130	85	41	66	108
	Inside Wire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Extention	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cabine Jumper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cable (not repair)	125	79	50	58	62	48	135	135	163	113	143	120	124	105	81	73	53
	Subcarrier(repair single only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Exchange(not repair)	13	2	5	5	4	15	40	24	8	4	32	10	13	16	7	3	29
	PCM Junction(not repair)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Others	37	146	7	16	0	8	23	20	25	43	28	14	7	14	9	7	31
	Total	956	711	418	521	435	627	836	764	737	681	816	699	666	565	338	414	457
4	TOK	136	91	50	73	58	69	66	77	73	65	67	81		40	80	53	
	Customer Premise	159	123	110	116	124	137	158	187	187	153	184	132		87	101	90	
	Drop Wire	279	200	127	147	139	148	204	241	258	190	259	159		114	140	105	
	Inside Wire	7	16	13	4	23	21	16	14	13	27	22	8		1	9	11	
	Extention	7	1	4	0	13	9	14	1	8	8	8	15		2	5	5	
	Cabine Jumper	0	0	0	0	0	0	0	0	0	0	0	0		0	1	0	
	Cable (not repair)	169	150	90	99	84	130	111	162	149	150	130	168		58	121	98	
	Subcarrier(repair single only)	0	0	0	0	0	0	1	0	0	0	0	0		0	0	0	
	Exchange(not repair)	19	14	0	2	0	3	10	19	26	11	8	9		24	8	0	
	PCM Junction(not repair)	0	0	0	0	0	0	0	0	0	0	0	0		2	0	1	
	Others	0	5	5	0	3	0	0	0	0	0	0	0		0	0	0	
	Total	776	600	399	441	444	517	580	701	714	604	678	572		328	465	363	

2-22 Number of Public Telephone by Type in the BMA

Type	Name	Data : Public Telephone Division of Installation Center												At the end of 1992.3				
		'91-1	'91-2	'91-3	'91-4	'91-5	'91-6	'91-7	'91-8	'91-9	'91-10	'91-11	'91-12		'92-1	'92-2	'92-3	Booth Type
Local	52 TH (D)		688	687	684	683	682	679	643	705	704	699	696	695	668	665	0	665
Local	BELL (D)		1,006	1,006	1,006	1,002	995	1,119	1,055	1,054	1,054	1,054	1,047	1,049	1,021	1,018	0	1,018
Local	106 TH (D)		1,429	1,401	1,353	1,322	1,327	1,294	1,424	1,419	1,382	1,344	1,324	1,311	1,305	1,298	5	1,293
Local	106 TH1 (D)		1,227	1,195	1,158	1,142	1,130	1,096	1,230	1,161	1,048	995	968	925	887	867	27	840
Local	106 TH2 (PB)		2,645	2,587	2,498	2,535	2,512	2,378	2,273	2,143	1,968	1,638	1,529	1,437	1,355	1,342	708	634
Local	107 TH2 (PB)		5,866	5,607	4,799	4,269	3,652	3,495	3,120	3,009	2,809	2,786	2,695	2,635	2,586	2,567	2,184	383
Local	107 TH3 (PB)		51	52	52	52	52	52	52	52	22	22	22	21	21	21	0	21
Local	771 TH1 (D)		196	196	196	192	192	192	192	192	192	191	191	184	181	170	0	170
Local	771 TH2 (PB)		81	82	82	82	82	82	82	82	82	82	80	81	80	80	0	80
Local	(?)		0	3	3	3	2	3	3	3	4	3	6	6	3	2	0	2
Combined	107 TH1 (STD)		723	716	702	665	667	628	539	450	406	257	232	213	167	167	167	0
Combined	UI 88/TA		892	1,269	2,459	3,078	3,796	4,205	3,652	2,275	1,663	920	831	836	884	1,080	900	180
Combined	W 14 TH		0	10	29	111	135	197	1,455	3,418	3,480	6,295	6,740	7,074	7,399	7,517	7,517	0
Card	CARD PHONE		2	2	2	46	56	62	73	107	122	205	206	258	273	315	0	315
	FONE POINT		0	0	0	0	86	79	89	67	70	93	71	69	91	69	0	69
			14,806	14,813	15,023	15,183	15,373	15,437	15,946	16,138	15,006	16,584	16,638	16,794	16,921	17,178	11,623	5,555

2-23 Number of Public Telephone Faults in the BMA

		Data : Monthly Maintenance Report by Public Telephone Division of Installation Center																	
Type	Cause of Fault	90-10	90-11	90-12	91-1	91-2	91-3	91-4	91-5	91-6	91-7	91-8	91-9	91-10	91-11	91-12	92-1	92-2	
Take care by Individual																			
Local	Coin	276	269	274	323	148	293	317	256	264	386	272	372	357	191	300	277	291	
	Outside Plant	458	312	296	300	262	286	322	270	447	370	337	288	284	247	197	228	188	
	Telephone Set	1,100	908	900	1,157	856	874	1,060	1,351	932	848	1,027	843	894	880	790	921	801	
	Exchange	7	15	19	8	3	9	11	17	9	4	9	6	4	1	21	3	2	
	Test OK				13							268	213	194	233	191	210	190	
	Total	1,841	1,504	1,489	1,801	1,269	1,462	1,710	1,894	1,652	1,608	1,913	1,722	1,733	1,552	1,499	1,639	1,472	
Take care by TOT (Booth)																			
Local	Coin	196	109	190	199	130	334	198	393	422	555	636	581	490	323	362	298	325	
	Outside Plant	731	526	340	356	332	461	342	312	338	370	479	350	397	254	182	163	71	
	Telephone Set	3,071	2,817	2,544	2,790	2,330	2,765	2,314	2,597	1,739	1,556	1,879	1,477	1,454	1,344	1,114	945	643	
	Exchange	14	13	10	4	9	27	12	5	5	11	13	4	5	8	4	3		
	Test OK				361							581	418	355	333	177	145	86	
	Total	4,012	3,465	3,084	3,710	2,801	3,587	2,866	3,307	2,504	2,492	3,588	2,830	2,701	2,262	1,839	1,554	1,125	
Combine	Coin	6	21	66	71	78	347	375	728	546	1,020	1,168	821	538	719	474	573	599	
	Outside Plant	36	33	28	18	30	68	79	121	163	230	240	255	302	231	251	272	196	
	Telephone Set	113	177	208	263	428	832	1,459	2,636	2,208	2,506	2,809	2,313	2,231	2,062	1,780	2,007	1,831	
	Exchange	4	3		5	5	4	3	7	2	4	11	7	12	7	15	4	17	
	Test OK				7							891	759	818	717	506	648	610	
	Total	159	234	302	364	541	1,271	1,916	3,492	2,919	3,760	5,119	4,155	3,901	3,736	3,026	3,504	3,253	
Total																			
	Coin	478	399	530	593	336	974	890	1,377	1,232	1,961	2,076	1,774	1,385	1,233	1,136	1,148	1,215	
	Outside Plant	1,225	871	664	674	624	815	743	703	948	970	1,056	893	983	732	630	663	455	
	Telephone Set	4,284	3,902	3,652	4,210	3,614	4,491	4,833	6,584	4,879	4,910	5,715	4,633	4,579	4,286	3,684	3,873	3,275	
	Exchange	25	31	29	17	17	40	26	29	16	19	33	17	21	16	40	10	19	
	Test OK	0	0	0	381	0	0	0	0	0	0	1,740	1,390	1,367	1,283	874	1,003	886	
	Total	6,012	5,203	4,875	5,875	4,611	6,320	6,492	8,693	7,075	7,860	10,620	8,707	8,335	7,550	6,364	6,697	5,850	

2-24 Number of Public Telephone Faults per 1,000 Telephone Sets per Month in the BMA

	Number of Public Phone Fault by Cause/ 1,000 Telephone Sets per Month												Source : Public Phone Division				
	'91-2	'91-3	'91-4	'91-5	'91-6	'91-7	'91-8	'91-9	'91-10	'91-11	'91-12	'92-1	'92-2				
Local																	
Coin	21.1	48.9	43.5	57.5	64.5	91.7	89.6	97.0	91.4	58.3	77.4	68.9	76.0				
Outside Plant	45.0	58.3	56.1	51.6	73.8	72.1	80.5	65.0	73.5	56.8	44.3	46.9	31.9				
Telephone Set	241.6	283.9	285.2	349.9	251.2	234.2	286.6	236.2	253.4	252.3	222.5	223.6	178.1				
Exchange	0.9	2.8	1.9	1.9	1.3	1.5	2.2	1.0	1.0	1.0	2.9	0.7	0.2				
Test OK	0.0	0.0	0.0	0.0	0.0	0.0	83.7	64.3	59.3	64.2	43.0	42.5	34.0				
Total	308.6	394.0	386.8	461.0	390.9	399.4	542.6	463.5	478.6	432.7	390.0	382.7	320.3				
Combine																	
Coin	48.3	173.9	117.6	188.9	118.7	202.8	206.9	133.6	97.0	96.2	60.7	70.5	70.9				
Outside Plant	18.6	34.1	24.8	31.4	35.5	45.7	42.5	41.5	54.4	30.9	32.2	33.5	23.2				
Telephone Set	265.0	427.1	457.4	684.0	480.2	498.2	497.5	376.5	402.1	276.0	228.1	247.1	216.7				
Exchange	3.1	2.0	0.9	1.8	0.4	0.8	1.9	1.1	2.2	0.9	1.9	0.5	2.0				
Test OK	0.0	0.0	0.0	0.0	0.0	0.0	157.8	123.6	147.4	96.0	64.8	79.8	72.2				
Total	335.0	637.1	600.6	906.1	634.8	747.5	906.7	676.4	703.0	500.0	387.8	431.4	385.0				
Total																	
Coin	24.0	65.8	59.2	90.7	80.1	127.0	130.2	109.9	92.3	74.3	68.3	68.4	71.8				
Outside Plant	42.1	55.0	49.5	46.3	61.7	62.8	66.2	55.3	65.5	44.1	37.9	39.5	26.9				
Telephone Set	244.1	303.2	321.7	433.6	317.4	318.1	358.4	287.1	305.1	258.4	221.4	230.6	193.5				
Exchange	1.1	2.7	1.7	1.9	1.0	1.2	2.1	1.1	1.4	1.0	2.4	0.6	1.1				
Test OK	0.0	0.0	0.0	0.0	0.0	0.0	109.1	86.1	91.1	77.4	52.5	59.7	52.4				
Total	311.4	426.7	432.1	572.5	460.2	509.2	666.0	539.5	555.4	455.3	382.5	398.8	345.7				

2-25 Number of Faults at Customer Premises in BMA 1

Fault at Customer Premises in BMA 1

Source : Monthly Report by Complaint Center Area 1

Year	Month	Ploen Chit		Surawong		Samranrat		Krungkasem		Sam Sen		Sukhumvit		Asoke Dindang		Pathumwan		Total	
		Tel.	Wire	Tel.	Wire	Tel.	Wire	Tel.	Wire	Tel.	Wire	Tel.	Wire	Tel.	Wire	Tel.	Wire	Tel.	Wire
1989	1			4	22	7	6	1	4		2		3					12	37
	2	35	48	11	96	25	33	18	13	8	5	2	11		7		7	99	220
	3	56	6	22	215	51	15	32	14	7	12	3	12		2		2	171	278
	4	56	30	17	189	30	3	37	5	5	2	1	8	1			1	148	237
	5	55	36	43	224	42		23	13	12	4							175	277
	6	59	13	19	234	55		31	22	11	4	7	43					182	316
	7	86		15	311	64		40	9	15	4	8	66		1	5	7	233	398
	8	76		14	204	98		33	14	14	3	13	68					248	289
	9	86	46	20	163	16	31	49	21	18	4	16	79	35	25	33	33	273	402
	10	83	3	11	288	11	9	62	40	11	9	9	66	1	2	1	2	189	419
	11	87	49	34	151	25	52	33	10	24	8	5	56	10	16	6	26	224	368
	12	86	54	20	104	20	25	31	20	9	25	2	4		8	1	12	169	252
1990	1	130	115	25	189	33	77	37	48	7	11	27	33	16	48	22	59	297	580
	2	95	133	29	199	34	49	12	25	4	9	20	33	33	47	29	38	256	533
	3	151	266	40	213	40	60	47	82	12	28	22	59	43	73	41	68	396	849
	4	72	189	4	216	67	52	30	41	10	15	13	54	45	57	37	50	278	674
	5	21	63	47	275	70	86	41	45	6	20	10	48	53	85	60	82	308	704
	6	18	88	31	207	45	78	30	65	19	25	13	38	35	61	44	91	235	653
	7	21	103	66	214	86	153	40	44	15	20	16	53	5	24	49	93	298	704
	8	19	183	45	235	48	132	29	55	12	14	15	49	44	79	29	50	241	797
	9	45	131	40	156	67	101	33	70	6	17	27	82	47	68	37	57	302	682
	10	31	138	24	193	36	99	22	74	5	38	6	41	37	121	32	76	193	780
	11	20	375	24	192	43	65	40	49	16	33	9	49	48	91	23	49	223	903
	12	7	31	24	112	26	50	32	54	16	24	17	47	43	56	18	46	183	420
1991	1	85	349	34	255	56	84	64	93	33	39	16	89	41	94	30	70	359	1,073
	2	88	297	31	158	37	56	53	52	23	58	16	44	22	57	23	59	293	781
	3	96	380	46	271	53	86	85	90	41	69	20	105	26	65	25	84	392	1,150
	4	63	376	25	159	44	97	46	89	21	59	19	79	47	69	21	70	286	998
	5	132	683	27	175	51	89	59	106	19	66	12	86	25	68	30	116	355	1,389
	6	74	486	15	143	47	63	49	94	26	48	16	92	34	97	27	89	288	1,112
	7	63	669	23	159	33	81	48	97	24	70	26	99	45	74	29	104	291	1,353
	8	57	580	45	207	51	84	31	103	27	63	26	122	36	122	27	23	300	1,304
	9	22	568	38	204	19	61	48	124	29	83	14	103	39	85	31	105	240	1,333
	10	37	510	52	298	53	121	42	116	37	65	14	101	56	97	33	116	324	1,424
	11	53	297	60	294	79	118	43	75	38	64	20	73	57	111	29	95	379	1,127
	12	40	220	53	231	63	52	45	35	35	54	10	74	56	124	22	104	324	894

2-26 List of Primary Cables in the BMA (April 1992) (2/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year						
			φ	Pair	Type					φ	Pair	Type							
1	4	Krung Kasem	0.4	1800	AP-FSF	1990	1	7	Pathum Wan	0.32	3600	ASP	1977						
			0.4	1800	ASP	1970				0.32	3600	ASP	1977						
			0.4	1800	ASP	1970				0.32	3600	ASP	1977						
			0.4	900	ASP	1970				0.32	3600	ASP	1977						
			0.4	1500	ASP	1970				0.32	3600	ASP	1977						
			0.4	3000	AP-FSF	1991				0.32	3600	ASP	1977						
			0.4	3000	AP-FSF	1991				0.4	3000	ASP	1977						
			0.4	3000	ASP	1969				0.32	3600	ASP	1977						
			0.4	3000	ASP	1984				0.32	3600	ASP	1977						
			0.4	1500	AP-FSF	1992				0.4	1800	AP-FSF	1983						
			0.4	3000	AP-FSF	1991				0.4	1800	AP-FSF	1983						
			0.4	3000	AP-FSF	1991				0.4	2400	AP-FSF	1983						
			0.4	2400	AP-FSF	1991				0.4	3000	AP-FSF	1991						
			0.4	3000	AP-FSF	1991				0.4	3000	AP-FSF	1991						
			0.4	3000	AP-FSF	1991				0.4	1800	AP-FSF	1991						
			1	5	Sukhumwit	0.4				2400	ASP	1984							
						0.4				3000	ASP	1984							
						0.32				3600	ASP	1984							
	0.32	4000				ASP				1984									
	0.4	2100				AP-FSF													
	0.4	2100				AP-FSF				1987									
	0.4	1500				AP-FSF				1987									
	0.4	2100				AP-FSF				1987									
	0.4	2100				AP-FSF				1987									
	0.4	2400				AP-FSF				1988									
	0.4	2400				AP-FSF				1988									
	0.4	3000				AP-FSF				1988									
	0.4	3000				AP-FSF				1988									
	0.4	3000				AP-FSF				1989									
	1	6				Asok Din Daeng				0.4	3000	AP-FSF	1992						
			0.4	3000	AP-FSF					1992									
			0.4	3000	ASP					1974									
			0.4	3000	ASP					1974									
0.4			3000	ASP	1974														
0.32			3600	ASP	1983														
0.4			3000	AP-FSF	1983														
0.4			3000	AP-FSF	1983														
0.4			1800	AP-FSF	1984														
0.4			3000	AP-FSF	1990														
0.4			3000	AP-FSF	1990														
0.4			3000	AP-FSF	1990														
0.4			3000	AP-FSF	1990														
0.4			2700	AP-FSF	1990														
0.4			3000	AP-FSF	1990														
0.4			2700	AP-FSF	1990														
0.4			3000	AP-FSF	1990														

2-26 List of Primary Cables in the BMA (April 1992) (3/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year
			φ	Pair	Type					φ	Pair	Type	
2	1	Chaiyaphruk	0.4	1100	AP	1986	2	3	Samut Prakan	0.4	2700	AP-FSF	1992
			0.4	1500	AP-FSF	1990				0.4	3000	AP-FSF	1992
			0.4	2100	AP-FSF	1986				0.4	1200	AP-FSF	1992
			0.4	2100	AP-FSF	1986				0.4	2400	AP-FSF	1992
			0.4	2100	AP-FSF	1989				0.4	1800	AP-FSF	1992
			0.4	2100	ASP	1962				0.32	3200	AP-FSF	1992
			0.4	900	AP	1986				0.4	3000	ASP	1975
			0.4	2100	AP-FSF	1989				0.32	3600	ASP	1975
			0.4	2100	ASP	1962				0.4	2400	AP-FSF	1984
			0.4	1800	AP-FSF	1992				0.5	1800	AP-FSF	1984
			0.4	2400	AP-FSF	1991				0.5	1800	AP-FSF	1989
			0.4	2400	ASP	1965				0.5	1800	AP-FSF	1989
			0.4	2700	ASP	1965				0.4	3000	AP-FSF	1989
			0.4	3000	AP-FSF	1990				0.4	3000	AP-FSF	1989
			0.4	3000	AP-FSF	1991				0.4	3000	AP-FSF	1992
			0.4	3000	ASP	1965	0.4	3000	AP-FSF	1992			
			0.4	2700	AP-FSF	1986	0.4	3000	AP-FSF	1992			
			0.4	3000	AP-FSF	1992	0.4	2400	AP-FSF	1992			
			0.4	3000	AP-FSF	1992	0.4	3000	AP-FSF	1992			
			0.4	3000	AP-FSF	1992	0.4	3000	AP-FSF	1992			
			0.4	2400	AP-FSF	1992	0.4	3000	AP-FSF	1992			
			0.4	2700	AP-FSF	1992	0.4	3000	AP-FSF	1992			
			0.4	3000	AP-FSF	1992	0.4	3000	AP-FSF	1992			
0.4	3000	AP-FSF	1992	0.4	3000	AP-FSF	1992						
2	2	Thung Mahamek	0.4	1800	ASP	1970	2	3	Bang Pu	0.4	2400	AP-FSF	1990
			0.4	1800	ASP	1970				0.65	1200	AP-FSF	1990
			0.4	1200	ASP	1970				0.65	1200	AP-FSF	1990
			0.4	1200	AP-FSF	1991	0.4	1800	AP-FSF				
			0.4	2100	AP-FSF	1991	2	4	Khlong Chan	0.4	3000	AP-FSF	1992
			0.4	1800	ASP	1970				0.5	2100	ASP	1971
			0.4	1800	AP-FSF	1992				0.4	3000	ASP	1971
			0.4	1800	AP-FSF	1992				0.4	3000	AP-FSF	1983
			0.4	1800	AP-FSF	1992				0.4	2100	ASP	1971
			0.4	2400	AP-FSF	1986				0.4	2700	ASP	1985
			0.4	3000	ASP	1985				0.4	2700	AP-FSF	1985
			0.4	1800	AP-FSF	1991				0.5	1200	ASP	1971
			0.4	1800	AP-FSF	1991				0.4	2100	AP-FSF	1992
			0.4	2400	AP-FSF	1991				0.4	3000	AP-FSF	1985
			0.4	2400	AP-FSF	1991				0.4	3000	AP-FSF	1985
0.4	1800	AP-FSF	1992	0.4	3000	AP-FSF				1985			
0.4	3000	ASP	1985	0.4	1800	AP-FSF	1990						
0.4	1800	AP-FSF	1991	0.4	2700	AP-FSF	1985						
0.4	3000	AP-FSF	1991	0.4	3000	AP-FSF	1988						
0.4	2400	AP-FSF	1991	0.4	2100	AP-FSF	1985						
0.4	2400	AP-FSF	1991	0.4	2400	AP-FSF	1990						
0.4	1800	AP-FSF	1992	0.4	2400	AP-FSF	1990						
0.4	1800	AP-FSF	1992	0.4	1800	AP-FSF	1990						
0.4	2700	AP-FSF	1990	0.4	2700	AP-FSF	1990						
0.4	1500	AP-FSF	1990	0.4	3000	AP-FSF	1990						
0.4	3000	AP-FSF	1990	0.4	3000	AP-FSF	1991						
2	3	Samut Prakan	0.4	2700	AP-FSF	1990	2	4	Suen Num Bueng K	0.4	1500	AP-FSF	1990
			0.4	1500	AP-FSF	1991				0.4	1500	AP-FSF	1992
			0.4	2400	AP-FSF	1991	2	4	Lam Thong	0.4	1200	AP-FSF	1985
			0.4	2700	AP-FSF	1985				0.4	1200	AP-FSF	1985
			0.4	2700	AP-FSF	1985				2	4	Ha Karat	0.4
0.4	2700	AP-FSF	1985	2	5	Phra Khanong	0.4	3000	AP-FSF				1990
0.4	1500	AP-FSF	1985				0.4	2400	ASP	1974			
0.4	2400	AP-FSF	1992				0.4	3000	AP-FSF	1991			

2-26 List of Primary Cables in the BMA (April 1992) (4/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year
			φ	Pair	Type					φ	Pair	Type	
2	5	Phra Khanong	0.4	1800	ASP	1974	2	7	Bang Na	0.5	1800	AP-FSF	1991
			0.4	1800	AP-FSF	1982				0.4	3000	AP-FSF	1989
			0.4	3000	AP-FSF	1984				0.4	3000	AP-FSF	1989
			0.4	2700	AP-FSF	1984				0.5	1800	AP-FSF	1989
			0.4	2400	AP-FSF	1984				0.65	1200	AP-FSF	1992
			0.4	2400	AP-FSF	1989				0.4	3000	AP-FSF	1992
			0.4	3000	AP-FSF	1989				0.4	3000	AP-FSF	1992
			0.4	2400	AP-FSF	1989				0.5	1800	AP-FSF	1992
			0.4	3000	AP-FSF	1989				0.4	2700	AP-FSF	1992
			0.4	3000	AP-FSF	1989				0.4	3000	AP-FSF	1992
			0.4	3000	AP-FSF	1989				0.4	2100	AP-FSF	1992
			0.4	3000	AP-FSF	1989				0.4	3000	AP-FSF	1992
			0.4	2400	AP-FSF	1984				0.5	1800	AP-FSF	1983
			0.4	1800	AP-FSF	1984				0.4	2700	AP-FSF	1983
			0.4	2400	AP-FSF	1984				0.4	2400	AP-FSF	1983
0.5	1800	AP-FSF	1988	0.65	600	AP-FSF	1983						
0.5	1800	AP-FSF	1988	0.5	1800	AP-FSF	1991						
0.5	1800	AP-FSF	1988	0.4	900	AP-FSF	1989						
0.4	2700	AP-FSF	1988	0.4	3000	AP-FSF	1989						
0.4	2400	AP-FSF	1988	0.5	1800	AP-FSF	1989						
0.4	2400	AP-FSF	1988	0.4	2400	AP-FSF	1991						
0.4	2400	AP-FSF	1988	2	7	Bang Phli Bang Bo	0.4	1500	AP-FSF	1990			
0.4	2400	AP-FSF	1988	0.4	2400	AP-FSF	1990						
0.4	2400	AP-FSF	1991	2	7	Bang Bo	0.4	1800	AP-FSF	1990			
0.4	3000	AP-FSF	1991	2	8	Hua mak	0.4	3000	ASP	1971			
0.4	2400	AP-FSF	1992				0.4	1800	ASP	1971			
0.4	2400	AP-FSF	1992				0.4	3000	ASP	1971			
0.4	1800	AP-FSF	1991				0.4	3000	ASP	1971			
0.4	1800	AP-FSF	1991				0.4	3000	AP-FSF	1984			
0.32	3600	ASP	1978				0.4	3000	AP-FSF	1984			
0.4	3000	AP-FSF	1992				0.4	3000	AP-FSF	1984			
0.4	1800	AP-FSF	1983				0.4	2400	AP-FSF	1984			
0.4	3000	AP-FSF	1983				0.4	2400	AP-FSF	1990			
0.4	2400	AP-FSF	1989				0.5	1800	AP-FSF	1990			
0.4	2400	AP-FSF	1989				0.4	2400	AP-FSF	1990			
0.4	2400	AP-FSF	1989				0.4	3000	AP-FSF	1990			
0.4	2400	AP-FSF	1989				0.4	3000	AP-FSF	1990			
0.4	2400	AP-FSF	1989				0.5	1800	AP-FSF	1988			
0.4	2100	AP-FSF	1989				0.65	1200	AP-FSF	1988			
0.4	2400	AP-FSF	1989	0.4	3000	AP-FSF	1991						
0.4	2400	AP-FSF	1989	2	9	Pravet	0.4	900	AP	1984			
0.4	2400	AP-FSF	1989	0.4	900	AP	1984						
0.4	2400	ASP	1969	2	9	Bang Chan	0.4	3000	AP-FSF	1989			
0.4	1200	AP-FSF	1990				0.4	2700	AP-FSF	1984			
0.4	2700	ASP	1970				0.4	900	AP-FSF	1984			
0.4	2700	ASP	1970				0.4	2400	AP-FSF	1990			
0.4	2100	ASP	1971				0.4	2400	AP-FSF	1990			
0.4	2100	ASP	1977				0.4	2400	AP-FSF	1990			
0.4	3000	ASP	1977				0.4	2700	AP-FSF	1984			
0.4	2700	AP-FSF	1983				0.5	1800	AP-FSF	1986			
0.4	2700	AP-FSF	1983				0.4	2700	AP-FSF	1990			
0.4	3000	AP-FSF	1983				0.4	3000	AP-FSF	1990			
0.4	2700	AP-FSF	1983				0.4	3000	AP-FSF	1990			
0.4	3000	AP-FSF	1983				0.4	3000	AP-FSF	1990			
0.4	2700	AP-FSF	1983				0.4	3000	AP-FSF	1990			
0.4	3000	AP-FSF	1983				0.4	1500	AP-FSF	1990			
0.4	2400	AP-FSF	1989				0.4	2700	AP-FSF	1990			
0.4	2700	AP-FSF	1988	2	9	Lat Krabang	0.4	2700	AP-FSF	1990			
0.4	2100	AP-FSF	1988	0.5	1800	AP-FSF	1991						
0.5	1800	AP-FSF	1989	0.5	1800	AP-FSF	1985						
0.5	1800	AP-FSF	1989	0.5	1800	AP-FSF	1985						
0.5	1800	AP-FSF	1991	0.5	2400	AP-FSF	1985						

2-26 List of Primary Cables in the BMA (April 1992) (5/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year
			φ	Pair	Type					φ	Pair	Type	
2	9	Phruk Sachart	0.4	2700	AP-FSF	1989							
2	9	Ram Kam Haeng	0.4	2700	AP-FSF	1992							
			0.4	2700	AP-FSF	1989							
			0.4	2700	AP-FSF	1992							
			0.5	900	AP-FSF	1989							
			0.4	2700	AP-FSF	1992							
			0.4	2700	AP-FSF	1992							
			0.4	2700	AP-FSF	1992							
			0.4	2700	AP-FSF	1992							
2	9	BGC RSU 1	0.4	600	AP	1990							
			0.4	600	AP	1990							
			0.4	300	AP-FSF	1990							
2	9	Nong Chok	0.4	1500	AP-FSF	1991							
			0.4	900	AP	1983							
			0.4	900	AP	1983							
2	9	BGC RSU 3	0.4	1800	AP-FSF	1990							
			0.4	600	AP-FSF	1990							
2	9	Nikhom Lat Krabar	0.4	900	AP	1990							
			0.4	900	AP	1990							
2	10	Sathupradit	0.4	1200	AP-FSF	1989							
			0.4	2400	AP-FSF	1989							
			0.4	1500	AP-FSF	1989							
			0.4	2700	AP-FSF	1985							
			0.4	3000	AP-FSF	1985							
			0.4	3000	AP-FSF	1985							
			0.4	3000	AP-FSF	1989							
			0.4	3000	AP-FSF	1989							
			0.4	2400	AP-FSF	1989							
			0.4	1800	AP-FSF	1989							
2	10	Thanon Tok	0.4	3000	AP-FSF	1991							
			0.4	2100	AP-FSF	1990							
			0.4	2400	AP-FSF	1983							
			0.4	2400	AP-FSF	1983							
			0.4	1800	AP-FSF	1983							
			0.4	2400	AP-FSF	1991							
			0.4	2400	AP-FSF	1991							
			0.4	2100	AP-FSF	1991							
			0.4	2100	AP-FSF	1991							

2-26 List of Primary Cables in the BMA (April 1992) (6/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year			
			φ	Pair	Type					φ	Pair	Type				
3	1	Lat Ya	0.4	1800	ASP	1985	3	3	Phasi Charoen	0.4	2400	AP-FSF	1988			
			0.4	3000	AP-FSF	1992				0.4	2700	AP-FSF	1988			
			0.4	2400	ASP	1985				0.4	2400	AP-FSF	1988			
			0.4	3000	AP-FSF	1985				0.4	2400	AP-FSF	1988			
			0.4	2700	AP-FSF	1985				0.4	3000	AP-FSF	1988			
			0.4	2700	AP-FSF	1985				0.5	1800	AP-FSF	1988			
			0.4	2700	AP-FSF	1985				0.4	3000	AP-FSF	1990			
			0.4	2700	AP-FSF	1985				0.4	3000	AP-FSF	1990			
			0.4	2100	AP-FSF	1985				0.4	3000	AP-FSF	1990			
			0.4	2700	AP-FSF	1985				3	3	Nong Khaem	0.4	2400	AP-FSF	1988
			0.4	3000	ASP	1985							0.4	2400	AP-FSF	1988
			0.4	2100	AP-FSF	1985							0.4	600	AP-FSF	1988
			0.5	1800	AP-FSF	1988							0.65	900	AP-FSF	1990
			0.4	2700	AP-FSF	1988							0.5	1500	AP-FSF	1990
			3	2	Bang Phlat	0.4				2400	AP-FSF	1990	0.4	2700	AP-FSF	1990
						0.4	1800	AP-FSF	1990	0.4	1200	AP-FSF	1990			
						0.4	2700	AP-FSF	1990	0.65	1200	AP-FSF	1990			
						0.4	3000	AP-FSF	1992	0.4	2400	AP-FSF	1989			
						0.65	1100	ASP	1983	3	3	Buttha Monthon (R)	0.4	600	AP	1984
						0.5	1800	ASP	1983				0.4	400	AP	1986
0.4	3000	AP-FSF				1991	0.4	200	AP				1989			
0.4	2400	AP-FSF				1991	0.5	600	AP-FSF							
0.4	3000	AP-FSF				1983	3	3	Muban Setthakit				0.4	2100	AP-FSF	1988
0.5	1200	AP-FSF				1983				0.4	900	AP-FSF	1988			
0.4	1800	AP-FSF				1983				0.4	2100	AP-FSF	1990			
0.4	2400	AP-FSF				1983				0.4	2700	AP-FSF	1990			
0.4	2400	AP-FSF				1983				0.4	1800	AP-FSF	1990			
0.4	3000	AP-FSF				1987				0.4	2700	AP-FSF	1989			
0.4	3000	AP-FSF				1987				0.4	2700	AP-FSF	1989			
0.4	3000	AP-FSF				1988				0.4	2700	AP-FSF	1990			
0.4	3000	AP-FSF				1988				0.4	1500	AP-FSF	1990			
0.4	3000	AP-FSF				1988				0.4	1800	AP-FSF	1990			
0.65	1200	AP-FSF				1989				0.4	1200	AP-FSF	1990			
0.5	1800	AP-FSF				1989				3	4	Rat Burana	0.4	2400	AP-FSF	1983
0.5	1500	AP-FSF				1989	0.4	1800	AP-FSF				1983			
0.65	1200	AP-FSF				1989	0.4	3000	AP-FSF				1983			
0.4	3000	AP-FSF	1988	0.4	1800	AP-FSF	1983									
0.4	3000	AP-FSF	1988	0.4	2400	AP-FSF	1983									
3	2	Bang Phlat (RSU1)	0.4	900	AP-FSF	1991	0.4	1800	AP-FSF	1983						
3	2	Bang Phlat (RSU2)	0.4	900	AP-FSF	1991	0.65	1200	AP-FSF	1988						
			0.4	1200	AP-FSF	1991	0.4	1200	AP-FSF	1988						
3	2	Bang Phlat (RSU4)	0.4	1200	AP-FSF	1991	0.4	2400	AP-FSF	1988						
3	2	Bang Phlat (RSU5)	0.4	1500	AP-FSF	1991	0.65	1200	AP-FSF	1988						
3	2	Bang Phlat (RSU7)	0.4	1500	AP-FSF	1991	0.4	2700	AP-FSF							
3	2	Phanu Rungsi	0.4	1500	AP-FSF	1991	0.4	2700	AP-FSF							
3	2	Phanu Rungsi	0.4	1500	AP-FSF	1991	0.4	1200	AP-FSF							
3	2	Bang Kruoi	0.4	1800	AP-FSF	1991	3	4	Phra Pradaeng	0.4	2400	AP-FSF	1992			
			0.4	3000	AP-FSF	1991				0.4	2400	AP-FSF	1984			
			0.4	2700	AP-FSF	1991				0.4	2400	AP-FSF	1984			
			0.4	2700	AP-FSF	1991				0.4	1500	AP-FSF	1984			
			0.4	2700	AP-FSF	1991				0.4	2700	AP-FSF	1984			
			0.4	1200	AP-FSF	1991				0.4	2400	AP-FSF	1989			
3	3	Phasi Charoen	0.4	3000	ASP	1975	0.4	2700	AP-FSF	1989						
			0.4	2400	ASP	1975	0.4	1200	AP-FSF	1989						
			0.4	1800	AP-FSF	1988	0.5	1800	AP-FSF	1989						
			0.4	3000	AP-FSF	1988	0.4	3000	AP-FSF	1989						

2-26 List of Primary Cables in the BMA (April 1992) (7/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year
			φ	Pair	Type					φ	Pair	Type	
3	4	Phra Pradaeng	0.65	1200	AP-FSF	1989	3	7	Ekkachai	0.5	1800	AP-FSF	1983
			0.65	1200	AP-FSF	1989				0.4	3000	AP-FSF	1983
			0.4	2400	AP-FSF	1989				0.65	1200	AP-FSF	1983
3	4	Pon Pra Chool (mo)	0.4	900	AP	1983				0.5	1800	AP-FSF	1983
			0.4	900	AP	1983				0.5	1800	AP-FSF	1987
			0.4	1800	AP-FSF	1990				0.65	1200	AP-FSF	1987
3	5	Charan Sanitwong	0.4	2400	ASP	1978				0.65	1200	AP-FSF	1987
			0.4	3000	ASP	1978				0.4	2400	AP-FSF	1987
			0.4	3000	AP-FSF	1984				0.65	1200	AP-FSF	1987
			0.4	3000	AP-FSF	1988				0.4	3000	AP-FSF	1987
			0.4	2100	AP-FSF	1984				0.4	2400	AP-FSF	1987
			0.4	2700	AP-FSF	1984				0.4	3000	AP-FSF	1987
			0.5	1800	AP-FSF	1984				0.4	2400	AP-FSF	1987
			0.4	2700	AP-FSF	1984	0.4	3000	AP-FSF	1992			
			0.4	3000	ASP	1978	3	8	Thon Buri	0.4	2400	ASP	
			0.4	900	AP-FSF	1989					200		
			0.5	1800	AP-FSF	1989				0.4	2400	AP-FSF	
			0.5	1500	ASP	1978				0.5	600	LTJ	
			0.4	3000	AP-FSF	1990				0.5	300	LTJ	
0.4	2100	AP-FSF	1987	0.4	3000	ASP							
0.4	2400	ASP		0.4	1800	ASP							
0.4	2100	AP-FSF	1989	0.5	1200	ASP							
0.4	2700	AP-FSF		0.65	200	LTJ							
0.4	2700	AP-FSF		0.4	3000	ASP							
0.4	3000	AP-FSF		0.32	4000	ASP				1976			
0.4	3000	AP-FSF	1989	0.32	4000	ASP				1976			
0.4	2100	AP-FSF	1989	0.4	3000	ASP							
0.4	2700	AP-FSF	1989	0.4	3000	PASP							
0.4	1500	AP-FSF	1989	0.4	2400	AP-FSF	1984						
0.4	2400	AP-FSF		0.4	2400	AP-FSF	1992						
0.4	2400	AP-FSF		0.4	2700	AP-FSF	1992						
0.4	2400	AP-FSF		0.4	2700	AP-FSF	1992						
0.4	2400	AP-FSF		0.4	2700	AP-FSF	1992						
3	6	Dao Khanong	0.4	3000	AP-FSF	1983							
			0.4	2400	ASP	1983							
			0.4	600	ASP	1983							
			0.4	1800	ASP	1983							
			0.4	2400	ASP	1983							
			0.4	3000	ASP	1983							
			0.4	2400	ASP	1983							
			0.4	1800	AP-FSF	1983							
			0.4	3000	AP-FSF	1983							
			0.4	3000	AP-FSF	1990							
			0.4	3000	AP-FSF	1990							
			0.4	3000	AP-FSF	1990							
			0.4	3000	AP-FSF	1990							
3	6	Tha Mall (RSU)	0.4	900	AP	1990							
			0.4	900	AP-FSF	1990							
3	7	Ekkachai	0.4	3000	AP-FSF	1983							
			0.4	3000	AP-FSF	1983							

2-26 List of Primary Cables in the BMA (April 1992) (8/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year						
			φ	Pair	Type					φ	Pair	Type							
4	1	Phahonyothin	0.5	200	LTJ	1970	4	3	Ram Inthra	0.4	1200	AP-FSF	1984						
			0.32	3600	ASP	1980				0.4	2400	AP-FSF	1984						
			0.4	3000	ASP	1980				0.4	1800	AP-FSF	1984						
			0.5	300	LTJ	1970				0.5	1800	AP-FSF	1988						
			0.65	300	LTJ					0.4	2400	AP-FSF	1988						
			0.65	300	LTJ					0.5	1500	AP-FSF	1988						
			0.65	600	LTJ	1970				0.5	1800	AP-FSF	1988						
			0.5	300	LTJ	1970				0.4	1200	AP-FSF	1988						
			0.65	600	LTJ	1970				0.4	2400	AP-FSF	1988						
			0.5	600	LTJ					0.5	1500	AP-FSF	1988						
			0.65	300	LTJ	1970				0.4	1800	AP-FSF	1988						
			0.65	600	LTJ	1970				0.4	3000	AP-FSF	1991						
			0.4	1200	ASP	1980				0.4	1800	AP-FSF	1991						
			0.4	1200	ASP	1970				0.4	3000	ASP	1978						
			0.4	2100	ASP	1970				0.4	2400	AP-FSF	1990						
			0.5	600	LTJ	1970				0.4	3000	ASP	1978						
			0.32	4000	ASP	1970				0.4	2700	AP-FSF	1985						
			0.4	2100	ASP					0.4	3000	AP-FSF	1985						
			0.4	600	ASP	1979				0.4	3000	AP-FSF	1985						
			0.4	900	ASP	1979				0.4	3000	AP-FSF	1985						
			0.4	2400	AP-FSF	1984				0.4	2400	AP-FSF	1985						
			0.4	3000	AP-FSF	1984				0.4	2700	AP-FSF	1985						
			0.4	3000	AP-FSF	1984				0.4	1800	AP-FSF	1988						
			0.4	3000	AP-FSF	1984				0.4	2400	AP-FSF	1988						
			0.4	3000	AP-FSF	1984				0.5	1500	AP-FSF	1988						
			0.4	2100	AP-FSF	1984				0.4	2400	AP-FSF	1988						
			0.4	1500	AP-FSF	1984				0.65	900	AP-FSF	1988						
			4	2	Ngam Wong Wan	0.4				2100	AP-FSF	1992	4	3	Lat Phrao 2	0.4	3000	ASP	1978
						0.5				1800	ASP	1977				0.4	2400	AP-FSF	1990
						0.4				3000	ASP	1983				0.4	3000	ASP	1978
						0.4				2400	AP-FSF	1988				0.4	2700	AP-FSF	1985
						0.4				3000	AP-FSF	1988				0.4	3000	AP-FSF	1985
0.4	3000	AP-FSF				1988	0.4	3000	AP-FSF	1985									
0.4	1800	AP-FSF				1988	0.4	3000	AP-FSF	1985									
0.4	2700	AP-FSF				1988	0.4	2400	AP-FSF	1988									
0.4	2700	AP-FSF				1989	0.4	1800	AP-FSF	1988									
0.5	1800	AP-FSF				1989	0.4	2400	AP-FSF	1988									
0.4	2700	AP-FSF				1989	0.4	3000	AP-FSF	1991									
0.5	1800	AP-FSF				1989	0.4	3000	AP-FSF	1992									
0.5	1800	AP-FSF				1990	0.4	3000	AP-FSF	1992									
0.4	3000	AP-FSF				1990	4	4	Lak Si	0.4	3000	ASP							
0.4	3000	AP-FSF				1990				0.4	2700	ASP							
0.4	2400	AP-FSF				1990				0.4	1500	ASP							
0.4	2400	AP-FSF				1990				0.4	3000	AP-FSF				1983			
0.4	2400	AP-FSF				1990				0.4	1800	AP-FSF				1983			
0.5	1800	AP-FSF				1990				0.4	900	AP-FSF				1986			
0.4	3000	AP-FSF				1990				0.4	1800	AP-FSF				1988			
0.4	3000	AP-FSF				1990				0.65	900	AP-FSF				1988			
0.4	2400	AP-FSF				1990				0.5	1500	AP-FSF				1988			
0.4	2400	AP-FSF				1990				0.65	900	AP-FSF				1988			
0.5	1800	AP-FSF				1990				0.5	1200	AP-FSF				1988			
0.4	2400	AP-FSF				1990				0.4	2100	AP-FSF				1988			
0.5	1800	AP-FSF				1990	0.4	900	AP-FSF										
0.4	1500	AP-FSF				1992	0.4	1500	AP-FSF	1988									
4	2	Bang Bus Thong				0.4	3000	AP-FSF	1990	0.4	2400	AP-FSF							
			0.4	3000	AP-FSF	1990	0.4	1800	AP-FSF	1988									
			0.5	1800	AP-FSF	1991	0.4	3000	AP-FSF										
			0.4	3000	AP-FSF	1991	0.4	3000	AP-FSF										
4	2	Sai Noi	0.4	900	AP-FSF	1991	0.4	3000	AP-FSF										
4	2	Bang Yai	0.4	1800	AP-FSF	1991	0.5	1800	AP-FSF										
4	2	Bang Yai City	0.4	1500	AP-FSF	1991	4	4	Chaeng Watthana	0.4	2400	AP-FSF							
4	3	Golden Place	0.4	1500	AP-FSF	1990				0.4	1800	AP-FSF	1987						
4	3	Ram Inthra	0.4	2400	AP-FSF	1984				0.4	2400	AP-FSF	1992						
4	3	Ram Inthra	0.4	2400	AP-FSF	1984				0.4	2400	AP-FSF							

2-26 List of Primary Cables in the BMA (April 1992) (9/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year						
			φ	Pair	Type					φ	Pair	Type							
4	4	Chaeng Watthana	0.4	1500	AP-FSF		4	5	Nava Nakhon	0.4	2400	AP-FSF	1990						
			0.5	1800	AP-FSF	1987				0.4	1200	AP-FSF	1984						
			0.5	1800	AP-FSF	1987				4	5	Thaniyaburi	0.4	1500	AP-FSF	1985			
			0.4	2700	AP-FSF	1987							0.4	1500	AP-FSF	1991			
			0.4	3000	AP-FSF	1987							0.4	1800	AP-FSF	1991			
			0.5	1800	AP-FSF	1987							0.4	1200	AP-FSF	1991			
			0.5	1800	AP-FSF	1987							4	5	Sananrak	0.4	1500	AP-FSF	1987
			0.5	1800	AP-FSF	1987							4	5	Lam Luk Ka	0.4	1200	AP-FSF	1990
			0.4	2700	AP-FSF	1987							4	6	Bang Su	0.4	3000	ASP	1970
			0.4	2400	AP-FSF	1987										0.4	1200	ASP	1970
			0.65	1200	AP-FSF	1987										0.4	3000	ASP	1970
			0.5	1800	AP-FSF	1987										0.4	2100	ASP	1976
			0.5	1800	AP-FSF	1987										0.4	2100	ASP	1976
			0.65	1200	AP-FSF	1992										0.32	3600	ASP	1976
			0.4	2400	AP-FSF	1992										0.4	2400	ASP	1976
			0.4	1200	AP-FSF	1992										0.4	2100	ASP	1976
			0.4	2700	AP-FSF	1992										0.4	2100	AP-FSF	1986
			0.4	3000	AP-FSF	1992										0.4	2700	AP-FSF	1986
			0.65	1200	AP-FSF	1992										0.4	2400	AP-FSF	1986
			4	4	Sikan	0.4										2400	AP-FSF	1984	0.4
0.4	1800	AP-FSF				1984	0.4	2400	AP-FSF							1988			
4	5	Rangsit	0.4	1500	AP-FSF	1984	0.4	2400	AP-FSF							1988			
			0.4	1800	AP-FSF	1984	0.4	2400	AP-FSF	1988									
			0.4	3000	AP-FSF	1989	0.4	2400	AP-FSF	1988									
			0.5	1800	AP-FSF	1990	0.4	2400	AP-FSF	1988									
			0.4	2700	AP-FSF	1990	0.4	2400	AP-FSF	1988									
			0.4	2000	AP-FSF	1990	0.4	2400	AP-FSF	1988									
4	5	Bang Phun	0.4	2000	AP-FSF	1984	4	6	Nonthaburi	0.4	2400	AP-FSF				1992			
			0.4	3000	AP-FSF	1992				0.4	1200	ASP	1985						
4	5	Don Muang	0.4	3000	AP-FSF	1992				0.4	2400	ASP	1985						
			0.4	2100	ASP	1984				0.4	2700	AP-FSF	1985						
			0.4	3000	ASP	1985				0.4	1200	AP-FSF	1985						
			0.5	1800	AP-FSF	1985				0.4	2700	AP-FSF	1989						
			0.4	3000	AP-FSF	1985				0.4	2700	AP-FSF	1988						
			0.4	3000	AP-FSF	1985				0.4	2400	AP-FSF	1988						
			0.4	2100	AP-FSF	1985				0.65	1200	AP-FSF	1989						
			0.9	300	AP-FSF	1982				0.65	1200	AP-FSF	1990						
			0.4	1800	AP-FSF	1989				0.65	1200	AP-FSF	1990						
			0.5	1800	AP-FSF	1989				0.65	1200	AP-FSF	1991						
			0.4	1800	AP-FSF	1989				0.65	1200	AP-FSF	1991						
			0.5	1800	AP-FSF	1989				0.65	1200	AP-FSF	1992						
			0.4	1800	AP-FSF	1989				0.4	3000	AP-FSF	1992						
			0.5	1800	AP-FSF	1990				4	7	Inthamara	0.4	3000	ASP	1971			
			0.4	1800	AP-FSF	1989							0.4	3000	AP-FSF	1990			
			0.4	2700	AP-FSF	1989							0.4	2700	ASP	1971			
			0.5	1800	AP-FSF	1989							0.4	2400	ASP	1971			
			0.4	1800	AP-FSF	1989							0.4	2700	ASP	1971			
			0.4	2700	AP-FSF	1989	0.32	3600	ASP				1983						
			0.5	1800	AP-FSF	1989	0.4	3000	AP-FSF				1983						
0.4	1200	AP-FSF	1989	0.4	3000	AP-FSF	1990												
0.4	1800	AP-FSF	1989	0.4	2700	AP-FSF	1990												
0.4	1800	AP-FSF	1990	0.4	3000	AP-FSF	1990												
0.4	1200	AP-FSF	1990	0.4	3000	AP-FSF	1990												
4	5	Lam Sai	0.4	600	AP-FSF		0.4	2700	AP-FSF				1990						
			0.4	3000	AP-FSF	1990	0.4	3000	AP-FSF				1990						
4	5	Nawa Nakhon	0.4	3000	AP-FSF	1984	0.4	2400	AP-FSF				1989						
			0.4	2400	AP-FSF	1984	0.4	2400	AP-FSF				1990						
			0.4	3000	AP-FSF	1990	0.4	2400	AP-FSF				1990						
			0.4	3000	AP-FSF	1990	4	7	Inthamara RSU				0.4	2400	AP-FSF	1990			

2-26 List of Primary Cables in the BMA (April 1992) (10/10)

Area Code	Main Section	Exchange Name	Primary Cable			Installed Year	Area Code	Main Section	Exchange Name	Primary Cable			Installed Year
			φ	Pair	Type					φ	Pair	Type	
4	7	Inthamara RSU	0.4	1200	AP-FSF	1990	4	9	Wang Hin	0.4	2700	AP-FSF	1990
4	8	Pak Kret	0.4	1800	AP-FSF	1984				0.4	3000	AP-FSF	1990
			0.4	2400	AP-FSF	1984				0.4	2700	AP-FSF	1990
			0.4	3000	AP-FSF	1988				0.4	3000	AP-FSF	1990
			0.4	1800	AP-FSF	1988	4	9	Sena Nikom	0.4	2700	AP-FSF	1990
			0.5	1200	AP-FSF	1988				0.4	2400	AP-FSF	1990
			0.4	2100	AP-FSF	1988				0.4	1200	AP-FSF	1990
			0.65	1200	AP-FSF	1984	4	9	Ban Kaew	0.4	1500	AP-FSF	1990
			0.65	600	AP-FSF	1984	4	9	Thana Thani	0.4	1500	AP-FSF	1990
			0.4	2700	AP-FSF	1984							
			0.65	600	AP-FSF	1984							
			0.4	2700	AP-FSF	1984							
			0.4	2700	AP-FSF	1984							
			0.65	600	AP-FSF	1984							
			0.9	600	AP-FSF	1984							
			0.9	400	AP-FSF	1984							
			0.65	1200	AP-FSF	1984							
			0.4	1500	AP-FSF	1984							
			0.5	1800	AP-FSF	1984							
			0.4	2700	AP-FSF	1984							
			0.4	2700	AP-FSF	1984							
			0.4	1500	AP-FSF	1984							
			0.4	1800	AP-FSF	1984							
4	8	Pathum Thani	0.4	2400	AP-FSF	1984							
			0.5	600	AP-FSF	1984							
			0.4	2400	AP-FSF	1984							
			0.4	2400	AP-FSF	1990							
			0.4	2700	AP-FSF	1990							
			0.5	1800	AP-FSF	1990							
4	8	Bang Kradi	0.5	1200	AP-FSF	1987							
			0.4	3000	AP-FSF	1987							
4	8	Lad Lum Kheao	0.5	1500	AP-FSF	1990							
4	8	Sam Khok	0.4	1500	AP-FSF	1990							
4	9	Lat Phrao 1	0.4	3000	ASP	1978							
			0.4	3000	ASP	1978							
			0.4	2400	ASP	1978							
			0.4	1200	ASP	1978							
			0.4	2400	AP-FSF	1984							
			0.4	3000	AP-FSF	1984							
			0.4	2700	AP-FSF	1984							
			0.4	2700	AP-FSF	1984							
			0.65	200	AP								
			0.4	2700	AP-FSF	1988							
			0.4	2700	AP-FSF	1988							
			0.4	2700	AP-FSF	1988							
			0.5	1800	AP-FSF	1988							
			0.4	3000	AP-FSF	1991							
4	9	Bang Khen	0.4	3000	ASP	1977							
			0.5	1200	ASP	1977							
			0.4	3000	ASP	1977							
			0.5	1200	ASP	1977							
			0.4	3000	AP-FSF	1983							
			0.4	1200	ASP	1977							
			0.4	3000	AP-FSF	1990							
			0.4	2700	AP-FSF	1990							
			0.4	2400	AP-FSF	1990							
			0.4	1800	AP-FSF	1990							

2-27 Hardware Fault of SPC Switch in the BMA (1/2)

Priority (Implementation Year)	Exchange Office Name	Unit Name	"1989"		Fault ratio (%)	"1990"		Fault ratio (%)	"1991"		Fault ratio (%)	No. of Line Capacity	
			TOTAL			TOTAL			TOTAL				
			LIB	OTH	LIB	OTH	LIB	OTH					
(1993 Year)	1	LAT KRABANG	LKG	155	3	3.38	78	3	1.70	80	2	1.75	3,820
		DON MUANG	DNM -2	63	8	0.37	42	1	0.25	205	11	1.20	14,240
		BANG PHLI	BPL	233	3	1.59	236	9	1.61	145	3	0.99	12,192
		SAMUT PRAKAN	SPK -2	28	8	0.81	18	1	0.52	33	0	0.96	2,870
		BANG CHAN	BGC	64	3	0.40	70	7	0.44	151	3	0.95	13,192
		PU CHAO SAMING	PSP -2	63	3	0.65	80	6	0.82	87	5	0.89	8,120
		EKKACHAI	EKC	86	9	0.36	81	3	0.34	211	10	0.88	19,970
		BANG KHAB	BGN -2	3	0	0.05	2	3	0.03	45	0	0.73	5,120
		KHLONG TOEI	KTI	40	16	0.81	13	8	0.26	32	3	0.65	4,096
		ON NUT	ONT	66	25	0.27	62	27	0.25	138	10	0.57	20,312
		PHRA PRADAENG	PPG -2	63	7	0.37	72	18	0.42	96	25	0.57	14,144
		BANG PU	BGU	8	0	0.13	21	2	0.34	31	1	0.50	5,120
		PAK KRET	PKK	35	9	0.18	44	12	0.23	82	9	0.42	16,288
		Sub total											139,484
(1994 Year)	2	LAT PHRAO 2	LTP-2	33	11	0.11	45	1	0.15	90	11	0.30	25,110
		BANG PHLAT	BGT -2	83	35	0.23	109	34	0.31	99	4	0.28	29,540
		PHAHONYOTHIN	PYT -3	5	10	0.08	14	11	0.23	14	9	0.23	5,000
		LAT PHRAO 1	LTP1 -2	16	5	0.08	29	12	0.15	39	7	0.20	15,960
		HUA MAK	HAM -2	10	10	0.04	14	16	0.06	47	3	0.19	20,384
		PHLOEN CHIT	PNC T-3	35	24	0.10	55	26	0.15	70	29	0.19	30,480
		CHAYAPHRUK	CYP -3	0	0	0.00	157	1	0.64	47	0	0.19	20,480
		Sub total											146,954
(1995 Year)	3	RAM INTHRA	RIT	57	15	0.30	13	2	0.07	35	9	0.18	15,925
		Bang Khae	BKE-2	7	2	0.05	8	2	0.05	26	4	0.18	12,192
		RAT BURANA	RBN	24	25	0.11	43	9	0.20	38	5	0.18	17,984
		KHLONG CHAN	KGC -2	36	16	0.16	31	13	0.13	40	9	0.17	19,240
		SAMSEN	SMS -2	7	2	0.09	24	0	0.32	12	0	0.16	6,242
		NONG KHAEM	NGK	518	12	3.27	186	8	1.17	23	1	0.15	13,192
		SAMRAN RAT	SRR -4	46	14	0.14	68	24	0.21	45	12	0.14	26,640
		LAK SI	LKS -T4	46	33	0.34	44	29	0.33	16	5	0.12	11,264
		BANG NA	BNA -2	15	4	0.08	20	2	0.11	21	10	0.11	15,240
		THUNG MAHAMEH	TMM -2	0	0	0.00	4	0	0.07	7	0	0.11	5,120
		PHRA KHANONG	PKG -T6	92	33	0.36	24	34	0.09	29	12	0.11	21,360
		CHARAN SANITW	CSW -2	33	4	0.18	50	3	0.27	20	2	0.11	15,192
	Sub total											179,591	
(1996 Year)	4	SATHUPRADIT	STD -2	8	2	0.04	16	3	0.09	17	2	0.10	14,862
		PATHU WAN	PTW -2	15	4	0.06	11	5	0.05	21	3	0.09	20,240
		SURAWONG	SRW -4	21	8	0.07	13	3	0.04	23	6	0.08	25,360
		SUKHIWIT	SKW	12	22	0.02	56	32	0.11	37	18	0.07	41,760
		TROK CHAN	TKC -2	9	5	0.06	7	8	0.04	11	4	0.07	13,192
		CHAENG WATTHA	CWT	13	2	0.07	18	8	0.09	13	3	0.07	16,192
		NAWA NAKHON	NWN	17	10	0.28	16	1	0.27	4	0	0.07	5,000
		LAT YA	LYT -T8	40	25	0.13	33	32	0.11	18	4	0.06	25,360
		BANG SU	BGS -2	22	7	0.14	13	5	0.08	8	0	0.05	13,192
		NGAM WONG WAN	NWW -2	21	31	0.07	32	16	0.10	16	12	0.05	26,591
	Sub total											201,749	

2-27 Hardware Fault of SPC Switch in the BMA (2/2)

Priority (Implementation Year)	Exchange Office Name	Unit Name	"1989"		Fault ratio (%)	"1990"		Fault ratio (%)	"1991"		Fault ratio (%)	No. of Line Capacity
			TOTAL			TOTAL			TOTAL			
			LIB	OTH	LIB	OTH	LIB	OTH				
(1997 Year)	5 ASOK DIN DAEN	ASD -2	13	9	0.04	28	9	0.08	15	3	0.04	28,480
	RANGSIT	RST	109	0	1.11	0	0	0.00	4	0	0.04	8,192
	PHASHICHAROEN	PSN-2	0	0	0.00	0	0	0.00	3	0	0.01	20,480
	INTHAMARA	ITM -2	0	0	0.00	0	0	0.00	2	1	0.01	20,480
	THANON TOK	TNT -2	24	1	0.15	4	1	0.03	1	0	0.01	13,312
	KRUNG KASEM	KKM -3	0	0	0.00	0	0	0.00	0	0	0.00	16,384
	BANG PHLI BANG	BBB	0	0	0.00	0	0	0.00	0	0	0.00	600
	DAO KHANONG	DKN -2	0	0	0.00	0	0	0.00	0	0	0.00	13,312
	MUBAN SETTHAK	MSK	0	0	0.00	0	0	0.00	0	0	0.00	14,336
	BANG BUA THONG	BBT	0	0	0.00	0	0	0.00	0	0	0.00	5,120
	PATHUM THANI	PTT	8	0	0.08	0	0	0.00	0	0	0.00	8,192
	NONHABURI	NTB-2	0	0	0.00	0	0	0.00	0	0	0.00	16,384
	THANYABURI	TYB	46	4	0.75	0	0	0.00	0	0	0.00	5,120
	BANG PHUN	BAN	0	0	0.00	0	0	0.00	0	0	0.00	5,120
	RAMKAMHIANG	RKN			0.00			0.00			0.00	11,776
Sub total											187,288	
TOTAL											855,066	

Note:

No of Line Capacity = Number of Line Capacity after 5th and 6th Project

Fault Ratio (%) = Number of Fault Ratio per 1,000 Line Capacities

(Fault Ratio = Total LIB Fault / 12 Month / No of line capacity x 1,000 Line Capacities)

LIB = Number of Line Interface Package Fault

OTH = Number of Other Package Fault

2 - 28 Necessary Capacity of Stand-by Generators (1/2)

Present state of installed standby generator and necessary capacity in the BMA (1/2)

Area	Unit Name	Supply from standby Generator	Standby Generator Capacity (KVA)	Required Capacity (KVA)	Area	Unit Name	Supply from standby Generator	Standby Generator Capacity (KVA)	Required Capacity (KVA)			
1	PNC -1	Possible	235	2 X 450	3	TNB -1	Possible	416				
	PNC -2	Possible				TNB T5	Possible					
	PNC T3	Impossible	No installed		3	BKE -1	Possible	70+300				
1	SRR -1	Possible	435 x 2			BKE -2	Possible					
	SRR -2	Possible				3	DKN -1	Possible	70	400		
	SRR -3	Possible					DKN -2	Impossible	No installed			
	SRR -4	Impossible			No installed		3	BGT -1	Possible			
1	KKM -2	Possible	500			BGT -2	Possible	Impossible	No installed			
	MTX	Possible			3	PSN -1	Possible	300				
	KKM -3	Possible	750			PSN -2	Impossible	No installed				
	KKM T	Possible				3	CSW -1	Impossible	No installed	400		
1	SRW -1	Possible	413 x 2		CSW -2	Impossible	No installed					
	SRW -2	Possible			3	RBN	Possible	300				
	SRW -3	Possible			3	LTY T8	Possible	400 x 2				
	C -93	Possible				LTY TC	Possible					
	SRW - T	Possible			3	MSK	Possible	200				
	SRW -4	Impossible		No installed		3	EKC	Possible	200 + 300			
1	SMS -1	Possible			3	NGK	Possible	200	300			
	SMS -2	Possible			3	PPG -1	Possible	300				
1	ASD -1	Impossible	No installed	500		PPG -2	Possible					
	ASD -2	Impossible	No installed		3	BBT	Impossible	No installed	500			
1	PTW -1	Impossible	No installed	500	4	PYT -1	Possible	413 + 500				
	PTW -2	Impossible	No installed			PYT -2	Possible					
1	SKW -1	Impossible	No installed	450			PYT T2I			Possible		
							PYT T2A			Possible		
2	CYP -2	Possible	300 + 93	500	4	ITM -1		55	400			
	CYP -3	Possible			ITM -2	Impossible	No installed					
2	BNA -1	Possible	65	500	4	BGN -1	Possible	300				
	BNA -2	Impossible	No installed			BGN -2	Impossible	No installed				
2	KGC -1	Possible	50	500	4	BGS -1		70	400			
	KGC -2	Impossible	No installed			BGS -2	Impossible	No installed				
2	RMK	?			4	DNM -1	Impossible	No installed	400			
2	TMM -1	Possible	100 + 300		DNM -2	Impossible	No installed					
2	TMM -2	Possible			4	LKS -1	Possible	500 + 100				
	STD -1	Possible	35 + 300			LKS T4	Possible	14.5				
2	STD -2	Possible				LKS TC	Possible					
	TNT -1	Possible	80 + 300		4	RIT	Possible	300				
2	TNT -2	Possible			4	LTP1 -1	Impossible	No installed	400			
	BGC	Possible	200			LTP1 -2	Impossible	No installed				

2 - 28 Necessary Capacity of Stand-by Generators (2/2)

Present state of installed standby generator and necessary capacity in the BMA (1/2)

Area	Unit Name	Supply from standby Generator	Standby Generator Capacity (KVA)	Required Capacity (KVA)	Area	Unit Name	Supply from standby Generator	Standby Generator Capacity (KVA)	Required Capacity (KVA)	
2	PKG -1	Possible	200 + 100	750	4	LTP2 -1	Impossible	No installed	400	
	PKG T6	Possible				200	500	LTP2 -2		Impossible
	PKG TC	Possible						300	300	CWT
	HAM -1	Possible	300	300		NTB -1	Possible			100
	HAM -2	Possible				300	300	NTB -2	Impossible	No installed
	TKC -1	Possible	200	300				NWW -1	Possible	100
	TKC -2	Possible				200 + 300	300	NWW -2	Impossible	No installed
	LKG	Possible	300	300				PKK	Possible	200 + 300
	KTI	Possible				300	300	PTT	Possible	200
	ONT	Possible	300	300				RST	Possible	200
	SPK -1	Possible				300	300	TYB	Possible	200
	SPK -2	Possible	200	500				NWN	Possible	200
	PSP -1	Possible				200 + 35	80	BAN	Impossible	No installed
	PSP -2	Possible								
	BPL	Possible								
BGU	Possible									
BBB	Impossible	No installed								

2 - 29 Forecast of Number of Fault in each Section and Year

Area Code	Section No.	Completed (1997)	No. of Fault (1997)	Fault Ratio (1997)	No. of Fault (1998)	Fault Ratio (1998)	No. of Fault (1999)	Fault Ratio (1999)	No. of Fault (2000)	Fault Ratio (2000)	No. of Fault (2001)	Fault Ratio (2001)	No. of Fault (2002)	Fault Ratio (2002)
1	1	43879	1214	0.0277	1167.0065	0.0266	1120.0129	0.0255	1073.0194	0.0245	1026.0258	0.0234	979.0323	0.0223
1	2	46811	889	0.0190	854.5671	0.0183	820.1742	0.0175	785.7613	0.0163	751.3484	0.0161	716.9355	0.0153
1	3	46716	1224	0.0262	1176.6194	0.0252	1129.2387	0.0242	1081.8581	0.0232	1034.4774	0.0221	987.0968	0.0211
1	4	31731	714	0.0225	686.3613	0.0216	658.7226	0.0207	631.0839	0.0199	603.4452	0.0190	575.8065	0.0181
1	5	29000	517	0.0178	496.9871	0.0171	476.9742	0.0164	456.9613	0.0158	436.9484	0.0151	416.9355	0.0144
1	6	33607	405	0.0121	389.3226	0.0116	373.6452	0.0111	357.9677	0.0107	342.2902	0.0102	326.6129	0.0097
1	7	20447	392	0.0192	376.8258	0.0184	361.6516	0.0177	346.4774	0.0169	331.3032	0.0162	316.1290	0.0155
	Sub Total	252211	5355	0.0212	5147.7097	0.0204	4940.4194	0.0196	4733.1290	0.0188	4525.8387	0.0179	4318.5484	0.0171
	PABX	30099	1539	0.0511	1479.4258	0.0492	1419.8516	0.0472	1360.2774	0.0452	1300.7032	0.0432	1241.1290	0.0412
	Public	5451	2018	0.3702	1939.8839	0.3559	1861.7677	0.3415	1783.6516	0.3272	1705.5355	0.3129	1627.4194	0.2986
	Total	287761	8912	0.0310	8567.0194	0.0298	8222.0387	0.0286	7877.0581	0.0274	7532.0774	0.0262	7187.0968	0.0250
2	1	22442	678	0.0302	624.2841	0.0278	570.5681	0.0254	516.8522	0.0230	463.1362	0.0206	409.4203	0.0182
2	2	22224	652	0.0293	600.3440	0.0270	548.6879	0.0247	497.0319	0.0224	445.3759	0.0200	393.7198	0.0177
2	3	24098	1570	0.0652	1445.6135	0.0600	1321.2271	0.0548	1196.8406	0.0497	1072.4541	0.0445	948.0676	0.0393
2	4	33098	1144	0.0346	1053.3643	0.0318	962.7283	0.0291	872.0928	0.0263	781.4570	0.0235	690.8213	0.0209
2	5	42797	917	0.0214	844.3488	0.0197	771.6976	0.0180	699.0464	0.0163	626.3952	0.0146	553.7440	0.0129
2	6	19229	450	0.0234	414.3478	0.0215	378.6957	0.0197	343.0435	0.0178	307.3913	0.0160	271.7391	0.0141
2	7	34510	1756	0.0509	1616.8773	0.0469	1477.7556	0.0428	1338.6339	0.0388	1199.5092	0.0348	1060.3865	0.0307
2	8	24246	739	0.0305	680.4512	0.0281	621.9024	0.0256	563.3536	0.0232	504.8048	0.0208	446.2560	0.0184
2	9	20139	763	0.0379	702.5498	0.0349	642.0995	0.0319	581.6493	0.0289	521.1990	0.0259	460.7488	0.0229
2	10	28668	691	0.0220	581.0277	0.0203	531.0155	0.0185	481.0232	0.0168	431.0309	0.0150	381.0386	0.0133
	Sub Total	271451	9300	0.0343	8363.1884	0.0315	7826.3768	0.0288	7059.5652	0.0261	6352.7536	0.0234	5615.9420	0.0207
	PABX	15042	924	0.0613	850.7942	0.0565	777.5884	0.0516	704.3826	0.0468	631.1768	0.0419	557.9710	0.0370
	Public	3999	1809	0.4524	1665.6783	0.4165	1522.3165	0.3807	1379.0348	0.3448	1235.7130	0.3090	1092.3913	0.2732
	Total	290512	12033	0.0414	11079.6609	0.0381	10126.3217	0.0349	9172.9826	0.0316	8219.6435	0.0283	7266.3043	0.0250
3	1	23572	466	0.0198	436.6356	0.0185	407.2712	0.0173	377.9068	0.0160	348.5425	0.0148	319.1781	0.0135
3	2	42913	1362	0.0317	1276.1753	0.0297	1190.3507	0.0277	1104.5260	0.0257	1018.7014	0.0237	932.8767	0.0217
3	3	28659	1080	0.0377	1011.9452	0.0353	943.8904	0.0329	875.8356	0.0306	807.7808	0.0282	739.7250	0.0258
3	4	22765	685	0.0301	641.8355	0.0282	598.6712	0.0263	555.5068	0.0244	512.3425	0.0225	469.1781	0.0206
3	5	34449	1166	0.0338	1092.5260	0.0317	1019.0521	0.0296	945.5781	0.0274	872.1041	0.0253	798.6301	0.0231
3	6	21504	463	0.0214	431.9503	0.0201	402.9014	0.0187	373.8521	0.0174	344.8027	0.0160	315.7534	0.0147
3	7	16714	608	0.0364	569.6877	0.0341	531.3753	0.0318	493.0630	0.0293	454.7507	0.0272	416.4384	0.0249
3	8	18393	566	0.0297	511.5945	0.0278	477.1890	0.0259	442.7836	0.0241	408.3781	0.0222	373.9726	0.0203
	Sub Total	208969	6374	0.0305	5972.1507	0.0286	5570.7014	0.0267	5169.0521	0.0247	4767.4027	0.0228	4365.7324	0.0209
	PABX	4991	373	0.0747	349.4959	0.0700	315.9818	0.0653	282.4871	0.0606	248.9836	0.0559	215.4795	0.0512
	Public	3409	1186	0.3485	1111.2658	0.3266	1036.5315	0.3046	961.7973	0.2826	887.0630	0.2607	812.3288	0.2387
	Total	217360	7933	0.0360	7433.1123	0.0342	6933.2241	0.0319	6433.3370	0.0298	5933.4433	0.0277	5433.5516	0.0250
4	1	23001	1313	0.0571	1187.1708	0.0516	1051.3417	0.0461	935.5125	0.0407	809.6833	0.0352	683.8542	0.0297
4	2	30572	1266	0.0414	1144.8750	0.0374	1073.2500	0.0335	902.0250	0.0295	780.7000	0.0255	659.3750	0.0216
4	3	42706	1559	0.0365	1409.5938	0.0330	1260.1917	0.0285	1110.7875	0.0260	961.3833	0.0225	811.9792	0.0190
4	4	35161	1402	0.0399	1267.6417	0.0356	1133.2833	0.0319	998.9250	0.0281	864.5667	0.0243	730.2083	0.0206
4	5	29907	1413	0.0472	1277.5875	0.0427	1142.1750	0.0382	1006.7625	0.0337	871.3500	0.0291	735.9375	0.0246
4	6	30820	1143	0.0371	1033.4625	0.0335	923.9250	0.0300	814.3875	0.0264	704.8500	0.0229	595.3125	0.0195
4	7	24913	840	0.0337	759.5000	0.0305	679.0000	0.0273	598.5000	0.0240	518.0000	0.0208	437.5000	0.0176
4	8	20510	720	0.0351	651.0000	0.0317	582.0000	0.0284	513.0000	0.0250	444.0000	0.0216	375.0000	0.0183
4	9	40101	1541	0.0384	1193.3208	0.0347	1045.6417	0.0311	897.9625	0.0274	750.2833	0.0237	602.6042	0.0200
	Sub Total	278091	11197	0.0403	10123.9542	0.0364	9040.2083	0.0325	7977.8625	0.0287	6904.8167	0.0248	5831.7708	0.0210
	PABX	9489	404	0.0426	365.2833	0.0385	326.5667	0.0344	287.8500	0.0303	249.1333	0.0263	210.4167	0.0222
	Public	4182	2402	0.5744	2171.8083	0.5193	1941.6167	0.4643	1711.4250	0.4092	1481.2333	0.3542	1251.0417	0.2991
	Total	291762	14003	0.0480	12661.0488	0.0434	11319.0917	0.0388	9977.1375	0.0342	8635.1833	0.0296	7293.2292	0.0250
Sub Total		1010722	32226	0.0319	29870.3939	0.0296	27514.7878	0.0272	25159.1817	0.0249	22803.5756	0.0226	20447.9695	0.0202
PABX		39641	3240	0.0818	3003.1675	0.0764	2766.3350	0.0716	2529.5025	0.0674	2292.6701	0.0634	2055.8376	0.0595
Public		17035	7415	0.4353	6872.9896	0.4033	6340.9797	0.3716	5788.9695	0.3398	5246.9594	0.3080	4704.9492	0.2760
Total		1067396	42881	0.0394	39746.5513	0.0366	36612.1025	0.0337	33477.6538	0.0308	30343.2051	0.0279	27206.7563	0.0250

2 - 30 Estimation of Necessary Staff in the Outside Plant Section (Area 1)

Area	Section	Team (1992)	Employees(1992)	Team (1993)	Employees(1993)	Team (1994)	Employees(1994)	Team (1995)	Employees(1995)	Team (1996)	Employees(1996)	Team (1997)	Employees(1997)
Area 1	1 Drop Wire Rep	6	12	6	12	5	10	5	10	5	10	5	10
	1 Cable Repair	3	15	3	15	3	15	4	12	4	12	4	12
	1 Preventive Test	1	5	1	5	1	5	1	5	1	5	1	5
	1 Cable Coaxing	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	1 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	1 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	1 Subcarrn Rops	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
	1 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	1 Sub total	16	46	16	46	15	43	15	40	13	39	13	39
	Area 1	2 Drop Wire Rep	4	8	4	8	4	8	4	8	4	8	4
2 Cable Repair		4	12	4	12	3	9	3	9	3	9	3	9
2 Preventive Test		1	5	1	5	1	5	1	5	1	5	1	5
2 Cable Coaxing		0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
2 Splicing Cable		0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
2 Gas Check & I		1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
2 Subcarrn Rops		1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
2 Leased Line R		1	3	1	3	1	3	1	3	1	3	1	3
2 Sub total		13	39	13	39	12	35	11	35	11	34	11	34
Area 1		3 Drop Wire Rep	6	12	6	12	5	10	5	10	5	10	5
	3 Cable Repair	3	15	3	15	3	15	4	12	4	12	4	12
	3 Preventive Test	1	5	1	5	1	5	1	5	1	5	1	5
	3 Cable Coaxing	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	3 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	3 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	3 Subcarrn Rops	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
	3 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	3 Sub total	16	46	16	46	15	43	15	40	13	39	13	39
	Area 1	4 Drop Wire Rep	4	8	4	8	4	8	4	8	4	8	4
4 Cable Repair		3	9	3	9	3	9	3	9	3	9	3	9
4 Preventive Test		1	5	1	5	1	5	1	5	1	5	1	5
4 Cable Coaxing		0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
4 Splicing Cable		0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
4 Gas Check & I		1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
4 Subcarrn Rops		1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
4 Leased Line R		1	3	1	3	1	3	1	3	1	3	1	3
4 Sub total		12	36	11	34	11	33	10	33	10	32	9	29
Area 1		5 Drop Wire Rep	3	6	3	6	2	4	2	4	2	4	2
	5 Cable Repair	2	6	2	6	2	6	2	6	2	6	2	6
	5 Preventive Test	1	5	1	5	1	5	1	5	1	5	1	5
	5 Cable Coaxing	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	5 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	5 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	5 Subcarrn Rops	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
	5 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	5 Sub total	10	31	10	31	9	28	8	28	8	27	8	27
	Area 1	6 Drop Wire Rep	2	4	2	4	2	4	2	4	2	4	2
6 Cable Repair		2	6	2	6	2	6	2	6	2	6	2	6
6 Preventive Test		1	5	1	5	1	5	1	5	1	5	1	5
6 Cable Coaxing		0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
6 Splicing Cable		0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
6 Gas Check & I		1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
6 Subcarrn Rops		1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
6 Leased Line R		1	3	1	3	1	3	1	3	1	3	1	3
6 Sub total		9	29	9	29	9	28	8	28	8	27	8	27
Area 1		7 Drop Wire Rep	2	4	2	4	2	4	2	4	2	4	2
	7 Cable Repair	2	6	2	6	2	6	2	6	2	6	2	6
	7 Preventive Test	1	5	1	5	1	5	1	5	1	5	1	5
	7 Cable Coaxing	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	7 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	7 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	7 Subcarrn Rops	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
	7 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	7 Sub total	9	29	9	29	9	28	8	28	8	27	8	27
	Total (A) Total		27	94	26	92	23	46	23	46	23	46	23
Total (A) Cable Repair		23	69	21	69	22	66	20	60	20	60	18	45
Total (A) Preventive Test		7	35	7	35	7	35	7	35	7	35	7	35
Total (A) Cable Coaxing		4	25	4	25	4	25	4	25	4	25	4	25
Total (A) Splicing Cable		4	18	4	18	4	18	4	18	4	18	4	18
Total (A) Gas Check & I		7	21	6	19	6	17	5	15	4	12	4	11
Total (A) Subcarrn Rops		7	14	6	13	6	11	5	10	4	8	4	7
Total (A) Leased Line R		7	21	7	21	7	21	7	21	7	21	7	21
Total (A) Total		83	256	83	251	77	238	74	229	72	225	69	199

2 - 30 Estimation of Necessary Staff in the Outside Plant Section (Area 2)

Area	Section	Team (1992)	Employee(1992)	Team (1993)	Employee(1993)	Team (1994)	Employee(1994)	Team (1995)	Employee(1995)	Team (1996)	Employee(1996)	Team (1997)	Employee(1997)
Area 2	1 Drop Wire Rep	3	6	3	6	3	6	3	6	2	4	2	4
	1 Cable Repair	3	9	3	9	3	9	3	9	2	6	2	6
	1 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	1 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	1 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	1 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	1 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	1 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	1 Sub total	11	34	11	34	10	30	9	30	8	27	8	27
Area 2	2 Drop Wire Rep	3	6	3	6	3	6	3	6	2	4	2	4
	2 Cable Repair	3	9	3	9	3	9	3	9	2	6	2	6
	2 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	2 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	2 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	2 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	2 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	2 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	2 Sub total	11	34	11	34	10	30	9	30	8	27	8	27
Area 2	3 Drop Wire Rep	7	14	7	14	6	12	6	12	5	10	5	10
	3 Cable Repair	6	18	6	18	5	15	5	15	4	12	4	12
	3 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	3 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	3 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	3 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	3 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	3 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	3 Sub total	18	51	18	51	16	45	15	45	13	39	13	39
Area 2	4 Drop Wire Rep	6	12	5	10	5	10	4	8	4	8	3	6
	4 Cable Repair	5	15	4	12	4	12	4	12	3	9	3	9
	4 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	4 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	4 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	4 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	4 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	4 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	4 Sub total	16	48	14	41	14	40	12	38	11	34	10	32
Area 2	5 Drop Wire Rep	4	8	4	8	4	8	3	6	3	6	3	6
	5 Cable Repair	4	12	3	9	3	9	3	9	3	9	2	6
	5 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	5 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	5 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	5 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	5 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	5 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	5 Sub total	13	39	12	36	12	33	10	33	10	32	9	29
Area 2	6 Drop Wire Rep	2	4	2	4	2	4	2	4	2	4	2	4
	6 Cable Repair	2	6	2	6	2	6	2	6	1	3	1	3
	6 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	6 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	6 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	6 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	6 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	6 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	6 Sub total	9	29	9	29	9	28	8	28	7	24	7	24
Area 2	7 Drop Wire Rep	8	16	8	16	7	14	6	12	6	12	5	10
	7 Cable Repair	7	21	6	18	6	18	5	15	5	15	4	12
	7 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	7 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	7 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	7 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	7 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	7 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	7 Sub total	20	56	19	55	18	50	15	45	15	44	13	39
Area 2	8 Drop Wire Rep	4	8	3	6	3	6	3	6	3	6	2	4
	8 Cable Repair	3	9	3	9	3	9	2	6	2	6	2	6
	8 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	8 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	8 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	8 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	8 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	8 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	8 Sub total	12	36	11	34	11	33	9	30	9	29	8	27
Area 2	9 Drop Wire Rep	4	8	3	6	3	6	3	6	3	6	2	4
	9 Cable Repair	3	9	3	9	3	9	3	9	2	6	2	6
	9 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	9 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	9 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	9 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	9 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	9 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	9 Sub total	12	36	11	34	11	33	10	33	9	29	8	27
Area 2	10 Drop Wire Rep	3	6	3	6	3	6	2	4	2	4	2	4
	10 Cable Repair	3	9	3	9	2	6	2	6	2	6	2	6
	10 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	10 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4
	10 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3
	10 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.5	2
	10 Subcarr Repa	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	10 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	10 Sub total	11	34	11	34	10	30	8	28	8	27	8	27
Total (A)	Total (A) Drop Wire Rep	44	88	41	82	39	78	35	70	32	64	28	56
	Total (A) Cable Repair	39	117	36	108	32	96	30	90	26	78	24	72
	Total (A) Preventive Test	10	30	10	30	10	30	10	30	10	30	10	30
	Total (A) Cable Constrn	5	35	5	35	5	35	5	35	5	35	5	35
	Total (A) Splicing Cable	5	25	5	25	5	25	5	25	5	25	5	25
	Total (A) Gas Check & I	10	30	9	27	8	24	7	21	6	18	5	15
	Total (A) Subcarr Repa	10	20	9	18	8	16	7	14	6	12	5	10
	Total (A) Leased Line R	10	30	10	30	10	30	10	30	10	30	10	30
	Total (A) Total	131	395	125	375	117	351	109	325	100	312	93	293

2 - 30 Estimation of Necessary Staff in the Outside Plant Section (Area 3)

Area	Section	Team (1992)	Employee(1992)	Team (1993)	Employee(1993)	Team (1994)	Employee(1994)	Team (1995)	Employee(1995)	Team (1996)	Employee(1996)	Team (1997)	Employee(1997)
Area 1	1 Drop Wire Rep	2	4	2	4	2	4	2	4	2	4	2	4
Area 1	1 Cable Repair	2	6	2	6	2	6	2	6	2	6	2	6
Area 1	1 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 1	1 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 1	1 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 1	1 Gas Check & I	1	3	0.9	3	0.8	3	0.7	2	0.6	2	0.50	2
Area 1	1 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 1	1 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 1	1 Sub total	9	29	9	29	9	28	8	28	8	27	8	27
Area 3	2 Drop Wire Rep	6	12	6	12	6	12	5	10	5	10	5	10
Area 3	2 Cable Repair	5	15	5	15	5	15	4	12	4	12	4	12
Area 3	2 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	2 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 3	2 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 3	2 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
Area 3	2 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 3	2 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	2 Sub total	16	46	16	46	16	45	13	40	13	39	13	39
Area 2	3 Drop Wire Rep	5	10	5	10	5	10	4	8	4	8	4	8
Area 2	3 Cable Repair	4	12	4	12	4	12	4	12	3	9	3	9
Area 2	3 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 2	3 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 2	3 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 2	3 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
Area 2	3 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 2	3 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 2	3 Sub total	14	41	14	41	14	40	12	39	11	34	11	34
Area 3	4 Drop Wire Rep	3	6	3	6	3	6	3	6	3	6	3	6
Area 3	4 Cable Repair	3	9	3	9	3	9	2	6	2	6	2	6
Area 3	4 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	4 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 3	4 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 3	4 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
Area 3	4 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 3	4 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	4 Sub total	11	34	11	34	11	33	9	30	9	29	8	27
Area 3	5 Drop Wire Rep	6	12	6	12	6	12	5	10	4	8	4	8
Area 3	5 Cable Repair	5	15	4	12	4	12	4	12	4	12	3	9
Area 3	5 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	5 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 3	5 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 3	5 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
Area 3	5 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 3	5 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	5 Sub total	16	46	14	41	14	40	13	40	12	37	11	34
Area 3	6 Drop Wire Rep	2	4	2	4	2	4	2	4	2	4	2	4
Area 3	6 Cable Repair	2	6	2	6	2	6	2	6	2	6	2	6
Area 3	6 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	6 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 3	6 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 3	6 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
Area 3	6 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 3	6 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	6 Sub total	9	29	9	29	9	28	8	28	8	27	7	24
Area 3	7 Drop Wire Rep	3	6	3	6	3	6	3	6	2	4	2	4
Area 3	7 Cable Repair	3	9	2	6	2	6	2	6	2	6	2	6
Area 3	7 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	7 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 3	7 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 3	7 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
Area 3	7 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 3	7 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	7 Sub total	11	34	10	31	10	30	9	30	8	27	8	27
Area 3	8 Drop Wire Rep	3	6	3	6	2	4	2	4	2	4	2	4
Area 3	8 Cable Repair	2	6	2	6	2	6	2	6	2	6	2	6
Area 3	8 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	8 Cable Construc	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
Area 3	8 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
Area 3	8 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
Area 3	8 Subcarri Reps	1	2	0.9	2	0.8	2	0.7	1	0.6	1	0.5	1
Area 3	8 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
Area 3	8 Sub total	10	31	10	31	9	28	8	28	8	27	8	27
Total (A)	Total (A) Drop Wire Rep	30	60	29	58	28	56	26	52	24	48	23	46
Total (A)	Total (A) Cable Repair	26	78	24	72	24	72	22	66	21	63	19	57
Total (A)	Total (A) Preventive Test	8	40	8	40	8	40	8	40	8	40	8	40
Total (A)	Total (A) Cable Construc	4	28	4	28	4	28	4	28	4	28	4	28
Total (A)	Total (A) Splicing Cable	4	20	4	20	4	20	4	20	4	20	4	20
Total (A)	Total (A) Gas Check & I	8	26	7	22	6	19	6	17	5	14	4	12
Total (A)	Total (A) Subcarri Reps	8	16	7	14	6	13	6	11	5	10	4	8
Total (A)	Total (A) Leased Line R	8	24	8	24	8	24	8	24	8	24	8	24
Total (A)	Total (A) Total	96	290	91	278	89	272	83	258	79	247	74	235

2 - 30 Estimation of Necessary Staff in the Outside Plant Section (Area 4)

Area	Section	Team (1992)	Employees(1992)	Team (1993)	Employees(1993)	Team (1994)	Employees(1994)	Team (1995)	Employees(1995)	Team (1996)	Employees(1996)	Team (1997)	Employees(1997)
Area 4	1 Drop Wire Rep	6	12	6	12	5	10	5	10	4	8	3	6
	1 Cable Repair	5	15	5	15	4	12	4	12	3	9	3	9
	1 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	1 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
	1 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
	1 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
	1 Subcarrir Reps	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	1 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	1 Sub total	16	46	16	46	14	40	13	40	11	34	10	32
	2 Drop Wire Rep	6	12	6	12	5	10	4	8	4	8	3	6
Area 4	2 Cable Repair	5	15	5	15	4	12	4	12	3	9	3	9
	2 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	2 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
	2 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
	2 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
	2 Subcarrir Reps	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	2 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	2 Sub total	16	46	16	46	14	40	12	38	11	34	10	32
	3 Drop Wire Rep	7	14	7	14	6	12	5	10	5	10	4	8
	Area 4	3 Cable Repair	6	18	6	18	5	15	5	15	4	12	3
3 Preventive Test		1	3	1	3	1	3	1	3	1	3	1	3
3 Cable Constrn		0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
3 Splicing Cable		0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
3 Gas Check & I		1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
3 Subcarrir Reps		1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
3 Leased Line R		1	3	1	3	1	3	1	3	1	3	1	3
3 Sub total		18	51	18	51	16	43	14	43	13	39	11	34
4 Drop Wire Rep		7	14	7	14	6	12	5	10	4	8	4	8
Area 4		4 Cable Repair	6	18	6	18	5	15	4	12	4	12	3
	4 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	4 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
	4 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
	4 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
	4 Subcarrir Reps	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	4 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	4 Sub total	18	51	18	51	16	43	15	40	12	37	11	34
	5 Drop Wire Rep	7	14	7	14	6	12	5	10	4	8	4	8
	Area 4	5 Cable Repair	6	18	6	18	5	15	4	12	4	12	3
5 Preventive Test		1	3	1	3	1	3	1	3	1	3	1	3
5 Cable Constrn		0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
5 Splicing Cable		0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
5 Gas Check & I		1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
5 Subcarrir Reps		1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
5 Leased Line R		1	3	1	3	1	3	1	3	1	3	1	3
5 Sub total		18	51	18	51	16	43	15	40	12	37	11	34
6 Drop Wire Rep		5	10	5	10	4	8	4	8	4	8	3	6
Area 4		6 Cable Repair	5	15	4	12	4	12	3	9	3	9	3
	6 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	6 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
	6 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
	6 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
	6 Subcarrir Reps	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	6 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	6 Sub total	15	44	14	41	13	38	11	35	11	34	10	32
	7 Drop Wire Rep	4	8	4	8	3	6	3	6	3	6	2	4
	Area 4	7 Cable Repair	3	9	3	9	3	9	3	9	2	6	2
7 Preventive Test		1	3	1	3	1	3	1	3	1	3	1	3
7 Cable Constrn		0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
7 Splicing Cable		0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
7 Gas Check & I		1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
7 Subcarrir Reps		1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
7 Leased Line R		1	3	1	3	1	3	1	3	1	3	1	3
7 Sub total		12	36	12	36	11	33	10	33	9	29	8	27
8 Drop Wire Rep		4	8	3	6	3	6	3	6	2	4	2	4
Area 4		8 Cable Repair	3	9	3	9	3	9	2	6	2	6	2
	8 Preventive Test	1	3	1	3	1	3	1	3	1	3	1	3
	8 Cable Constrn	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
	8 Splicing Cable	0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
	8 Gas Check & I	1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
	8 Subcarrir Reps	1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
	8 Leased Line R	1	3	1	3	1	3	1	3	1	3	1	3
	8 Sub total	12	36	11	34	11	33	9	30	8	27	8	27
	9 Drop Wire Rep	7	14	7	14	6	12	5	10	5	10	4	8
	Area 4	9 Cable Repair	6	18	6	18	5	15	4	12	4	12	3
9 Preventive Test		1	3	1	3	1	3	1	3	1	3	1	3
9 Cable Constrn		0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.50	4
9 Splicing Cable		0.5	3	0.5	3	0.5	3	0.5	3	0.5	3	0.50	3
9 Gas Check & I		1	3	0.9	3	0.8	2	0.7	2	0.6	2	0.50	2
9 Subcarrir Reps		1	2	0.9	2	0.8	2	0.7	2	0.6	1	0.5	1
9 Leased Line R		1	3	1	3	1	3	1	3	1	3	1	3
9 Sub total		18	51	18	51	16	45	13	40	13	39	11	34
Total (A) Drop Wire Rep		53	106	50	100	42	84	39	78	35	70	29	58
Total (A) Cable Repair		45	135	42	126	38	114	33	99	29	87	23	75
Total (A) Preventive Test	9	45	9	45	9	45	9	45	9	45	9	45	
Total (A) Cable Constrn	5	32	5	32	5	32	5	32	5	32	5	32	
Total (A) Splicing Cable	3	23	3	23	3	23	3	23	3	23	3	23	
Total (A) Gas Check & I	9	27	8	24	7	22	6	19	5	16	5	14	
Total (A) Subcarrir Reps	9	18	8	16	7	14	6	13	5	11	5	9	
Total (A) Leased Line R	9	27	9	27	9	27	9	27	9	27	9	27	
Total (A) Total	143	412	135	393	121	360	112	335	102	310	90	282	

2 - 30 Estimation of Necessary Staff in the Outside Plant Section (Total and Surrounding Area)

All Total	All Total	Drop Wire Rep	154	308	146	292	132	264	123	246	114	228	103	198
	All Total	Cable Repair	133	399	123	375	116	348	103	315	90	288	86	249
	All Total	Preventive Te	34	170	34	170	34	170	34	170	34	170	34	170
	All Total	Cable Constru	17	119	17	119	17	119	17	119	17	119	17	119
	All Total	Splicing Cable	17	85	17	85	17	85	17	85	17	85	17	85
	All Total	Gas Check & I	34	102	31	92	27	82	24	71	20	61	17	51
	All Total	Substanc Repa	34	68	31	61	27	54	24	48	20	41	17	34
	All Total	Lead and Lina R	34	102	34	102	34	102	34	102	34	102	34	102
	Ordinary Total		457	1353	434	1296	404	1224	378	1156	353	1091	325	1008
	PABX Total		31	95	28	84	26	78	24	72	23	69	22	66
	Public Total		69	179	75	202	90	243	98	270	102	289	103	302
	TOTAL		557	1625	537	1582	520	1545	500	1498	478	1452	450	1376
	Ratio			1.00		0.97		0.95		0.92		0.89		0.85
	Nakhoon Pathom		34		33		32		31		30		29	
	Sama Sakon		30		29		28		28		27		25	
	Apizhaya		31		30		29		28		27		26	
	Total		95		92		90		87		85		80	
	Ordinary All Total		1448		1388		1314		1243		1179		1088	
Area	Connections	No. Connected (1992)	No. of Faults (1992)	Fault Ratio (1992)	No. of Faults (1993)	Fault Ratio (1993)	No. of Faults (1994)	Fault Ratio (1994)	No. of Faults (1995)	Fault Ratio (1995)	No. of Faults (1996)	Fault Ratio (1996)	No. of Faults (1997)	Fault Ratio (1997)
Area 1	PABX	30099	1519	0.0511	1479	0.0492	1420	0.0472	1360	0.0452	1301	0.0432	1241	0.0412
Area 2	PABX	15062	924	0.0613	851	0.0565	778	0.0516	704	0.0468	631	0.0419	558	0.0370
Area 3	PABX	4891	373	0.0762	348	0.0706	326	0.0663	302	0.0606	279	0.0559	255	0.0512
Area 4	PABX	9489	404	0.0426	365	0.0385	327	0.0344	288	0.0305	249	0.0263	210	0.0222
	Total	59641	3240	0.0543	3045	0.0511	2850	0.0478	2655	0.0445	2460	0.0412	2265	0.0380
Area 1	Public	5451	2018	0.3702	2379	0.3559	2867	0.3415	3229	0.3372	3548	0.3129	3825	0.2986
Area 2	Public	3999	1809	0.4524	1955	0.4165	2328	0.3807	2474	0.3448	2541	0.3090	2537	0.2732
Area 3	Public	3403	1186	0.3485	1331	0.3266	1597	0.3046	1742	0.2826	1846	0.2607	1910	0.2387
Area 4	Public	4182	2402	0.5744	2516	0.5193	3009	0.4543	3123	0.4092	3111	0.3542	2971	0.2991
	Total	17033	7415	0.4353	8181	0.4802	8947	0.5252	9712	0.5701	11048	0.6151	11244	0.6600
Area	Section	Team (1992)	Employees (1992)	Team (1993)	Employees (1993)	Team (1994)	Employees (1994)	Team (1995)	Employees (1995)	Team (1996)	Employees (1996)	Team (1997)	Employees (1997)	
Area 1	PABX	14	42	14	42	13	39	13	39	12	36	12	36	
Area 2	PABX	9	27	8	24	7	21	7	21	6	18	5	15	
Area 3	PABX	4	12	3	9	3	9	3	9	3	9	3	9	
Area 4	PABX	4	12	4	12	3	9	3	9	3	9	2	6	
	Total	31	95	25	84	26	78	24	72	23	69	22	66	
Area 1	Public	19	38	22	44	26	52	30	60	33	66	35	70	
Area 2	Public	17	34	18	36	21	42	23	46	23	46	23	46	
Area 3	Public	11	22	12	24	15	30	16	32	17	34	18	36	
Area 4	Public	22	44	23	46	28	56	29	58	29	58	27	54	
	Recsh		41		52		63		74		85		96	
	Total	69	179	75	201	90	243	98	270	102	289	103	302	

2 - 31 Estimation of Necessary Staff in the Switching Maintenance Section (Area 1)

No.	Type	Area	Exchange Name	Number of Capacity		1992		1993		1994		1995		1996		1997	
				1992	1997	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	Centralizat	No. of Emp.
1	SPC	1	ASOK DIN DARNG	28,480	38,480	3.62		3.62		3.62		3.62		3.62			1.67
1	XB	1	ASOK DIN DARNG	10,000	0	6.24		6.24		6.24	5.68						
2	MTX	1	KRUNG KASEM	0		10.00		10.00		10.00		10.00		10.00			10.00
2	TC	1	KRUNG KASEM	0		6.00		6.00		6.00		6.00		6.00			6.00
2	XBTI	1	KRUNG KASEM	0		6.00		6.00		6.00		6.00		6.00			6.00
2	CAMA	1	KRUNG KASEM	0		4.00		4.00		4.00		4.00		4.00			4.00
2	SFCTI	1	KRUNG KASEM	0		6.00		6.00		6.00		6.00		6.00			6.00
2	SPC	1	KRUNG KASEM	16,384	26,384	2.92		2.92		2.92		2.92		2.92			10.27
2	XB	1	KRUNG KASEM	10,000	0	6.24		6.24	5.61								
3	SPC	1	PATHUM WAN	21,240	26,624	3.20		3.20		3.20		3.20		3.20			1.40
3	XB	1	PATHUM WAN	5,384	0	4.32		4.32		4.32		4.32		4.32	4.01		
4	SPC	1	PHLON CHIT	36,400	58,400	4.06		4.06		4.06		4.06		4.06			13.59
4	XB	1	PHLON CHIT	12,000	0	6.93	12.01										
4	XB	1	PHLON CHIT	10,000	0	6.24											
5	SPC	1	SAMRAN RAT	26,640	56,640	3.51		3.51		3.51		3.51		3.51			2.05
5	XB	1	SAMRAN RAT	10,000	0	6.24		6.24	17.10								
5	XB	1	SAMRAN RAT	10,000	0	6.24		6.24									
5	XB	1	SAMRAN RAT	10,000	0	6.24		6.24									
6	SPC	1	SAMSEN	6,242	12,042	2.31		2.31		2.31		2.31		2.31			1.06
6	XB	1	SAMSEN	5,800	0	4.51		4.51		4.51		4.51	4.16				
7	SPC	1	SUKHUMWIT	41,760	41,760	4.35		4.35		4.35		4.35		4.35			1.74
8	C93	1	SURAWONG	0		6.00		6.00		6.00		6.00		6.00			6.00
8	XBT7	1	SURAWONG	0		6.00		6.00		6.00		6.00		6.00			6.00
8	SPC	1	SURAWONG	32,528	62,528	3.84		3.84		3.84		3.84		3.84			2.17
8	XB	1	SURAWONG	10,000	0	6.24	17.14										
8	XB	1	SURAWONG	10,000	0	6.24											
8	XB	1	SURAWONG	10,000	0	6.24											
			AREA TOTAL	322,858	322,858	143.72	29.15	111.83	22.71	86.87	5.68	80.63	4.16	76.12	4.01	10.09	67.86

2 - 31 Estimation of Necessary Staff in the Switching Maintenance Section (Area 2)

No.	Type	Area	Exchange Name	1,992	1,997	1992	1993	1993	1994	1994	1995	1995	1996	1996	1997	1997	1997
						No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC
9	SPC	2	CHAIYRPHRUK	20,480	20,480	3.16		3.16		3.16		3.16		3.16			3.16
9	XB	2	CHAIYRPHRUK	13,000	13,000	7.25		7.25		7.25		7.25		7.25			7.25
10	SPC	2	BANG CHAN	18,288	18,288	3.03		3.03		3.03		3.03		3.03			3.03
11	SPC	2	BANG NA	15,240	15,240	2.85		2.85		2.85		2.85		2.85			2.85
11	SPC	2	BANG NA	18,432	18,432	3.04		3.04		3.04		3.04		3.04			3.04
11	XB	2	BANG NA	12,000	12,000	6.93		6.93		6.93		6.93		6.93			6.93
12	SPC	2	BANG PHLI	30,064	30,064	3.70		3.70		3.70		3.70		3.70			3.70
13	SPC	2	HUA MAK	28,576	36,576	3.62		3.62		3.62		3.62		3.62			3.62
13	XB	2	HUA MAK	8,000		5.46		5.46		5.46		5.46		5.46	5.02		
14	SPC	2	KHLONG TOHI	14,096	14,096	2.78		2.78		2.78		2.78		2.78			2.78
15	SPC	2	KHLONG CHAN	39,648	39,648	4.23		4.23		4.23		4.23		4.23			4.23
15	SPC	2	KHLONG CHAN	11,776	24,776	2.64		2.64		2.64		2.64		2.64			2.64
15	XB	2	KHLONG CHAN	13,000		7.25		7.25		7.25		7.25	6.56				
16	SPC	2	LAT KRABANG	4,844	4,844	2.22		2.22		2.22		2.22		2.22			2.22
17	SPC	2	ON NUT	26,384	26,384	3.50		3.50		3.50		3.50		3.50			3.50
18	TC	2	PHRAKHANONG			6.00		6.00		6.00		6.00		6.00			6.00
18	SPC	2	PHRAKHANONG	21,360	21,360	3.21		3.21		3.21		3.21		3.21			3.21
18	XB	2	PHRAKHANONG	8,000	8,000	5.46		5.46		5.46		5.46		5.46			5.46
19	SPC	2	PUCHAO SAMINOPHRA	18,360	25,360	3.03		3.03		3.03		3.03		3.03			3.03
19	XB	2	PUCHAO SAMINOPHRA	7,000		5.04		5.04		5.04		5.04	4.04				
20	SPC	2	SUMUT PRAKAN	2,870	2,870	2.10		2.10		2.10		2.10		2.10			2.10
20	SPC	2	SUMUT PRAKAN	6,144	11,144	2.30		2.30		2.30		2.30		2.30			2.30
20	XB	2	SUMUT PRAKAN	5,000		4.14		4.14	3.83								
21	SPC	2	SATHUPRADIT	14,862	18,112	2.83		2.83		2.83		2.83		2.83			2.83
21	XB	2	SATHUPRADIT	3,250		3.28		3.28		3.28	3.09						
22	SPC	2	THANON TOK	13,312	13,312	2.73		2.73		2.73		2.73		2.73			2.73
22	XB	2	THANON TOK	5,250	5,250	4.26		4.26		4.26		4.26		4.26			4.26
23	SPC	2	THUNG MAHAMBK	5,120	5,120	2.24		2.24		2.24		2.24		2.24			2.24
23	XB	2	THUNG MAHAMBK	10,000	10,000	6.24		6.24		6.24		6.24		6.24			6.24
24	SPC	2	TROK CHAN	16,264	16,264	2.91		2.91		2.91		2.91		2.91			2.91
24	XB	2	TROK CHAN	10,000	10,000	6.24		6.24		6.24		6.24		6.24			6.24
50	SPC	2	BANG PU	6,144	6,144	2.30		2.30		2.30		2.30		2.30			2.30
51	SPC	2	BANG PHLI BANG BO	5,696	5,696	2.27		2.27		2.27		2.27		2.27			2.27
			AREA TOTAL	432,460	432,460	128.25	0.00	128.25	3.83	124.11	3.09	120.83	10.60	108.54	5.02	0.00	103.08

2 - 31 Estimation of Necessary Staff in the Switching Maintenance Section (Area 3)

No.	Type	Area	Exchange Name			1992	1993	1993	1994	1994	1995	1995	1996	1996	1997	1997	1997
				1992	1997	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC
25	XBT5	3	THON BURI	0		6.00		6.00		6.00		6.00		6.00			6.00
25	SPC	3	THON BURI	8,192	28,192	2.43		2.43		2.43		2.43		2.43			2.43
25	XB	3	THON BURI	20,000		8.86		8.86		8.86		8.86		8.86	7.69		
26	SPC	3	BANG KHAE	12,192	12,192	2.67		2.67		2.67		2.67		2.67			2.67
26	XB	3	BANG KHAE	6,000	6,000	4.60		4.60		4.60		4.60		4.60			4.60
27	SPC	3	BANG PHLAT	58,140	69,140	5.21		5.21		5.21		5.21		5.21			5.21
27	XB	3	BANG PHLAT	11,000		6.60		6.60		6.60	6.05						
28	SPC	3	CHARAN SANITWONG	15,192	15,192	2.85		2.85		2.85		2.85		2.85			2.85
28	XB	3	CHARAN SANITWONG	5,100	5,100	4.19		4.19		4.19		4.19		4.19			4.19
29	SPC	3	DAO KHANONG	15,360	15,360	2.86		2.86		2.86		2.86		2.86			2.86
29	XB	3	DAO KHANONG	12,000	12,000	6.93		6.93		6.93		6.93		6.93			6.93
30	SPC	3	EKKACHAI	32,258	32,258	3.83		3.83		3.83		3.83		3.83			3.83
31	TC	3	LAT YA			6.00		6.00		6.00		6.00		6.00			6.00
31	SPC	3	LAT YA	25,360	25,360	3.44		3.44		3.44		3.44		3.44			3.44
32	SPC	3	NONG KHANONG	22,384	22,384	3.27		3.27		3.27		3.27		3.27			3.27
33	SPC	3	PHASI CHAROEN	20,480	20,480	3.16		3.16		3.16		3.16		3.16			3.16
33	XB	3	PHASI CHAROEN	5,000	5,000	4.14		4.14		4.14		4.14		4.14			4.14
34	SPC	3	PHRA PRADAENG	19,216	22,526	3.08		3.08		3.08		3.08		3.08			3.08
34	XB	3	PHRA PRADAENG	3,310		3.31		3.31	3.12								
35	SPC	3	RAT BURANA	22,080	22,080	3.25		3.25		3.25		3.25		3.25			3.25
53	SPC	3	BANG BUA THONG	14,848	14,848	2.83		2.83		2.83		2.83		2.83			2.83
54	SPC	3	MUBAN SETTHAKIT	18,432	18,432	3.04		3.04		3.04		3.04		3.04			3.04
			AREA TOTAL	346,544	346,544	92.52	0.00	92.52	3.12	89.21	6.05	82.61	0.00	82.61	7.69	0.00	73.73

2 - 31 Estimation of Necessary Staff in the Switching Maintenance Section (Area4)

No.	Type	Area	Exchange Name	Number of Capacity		1992	1993	1993	1994	1994	1995	1995	1996	1996	1997	1997	1997
				1,992	1,997	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC	No. of Emp.	XB to SPC
36	XBT2	4	PIRHONYOTHIN			6.00		6.00		6.00		6.00		6.00			6.00
36	SPC	4	PIRHONYOTHIN	17,264	29,264	2.97		2.97		2.97		2.97		2.97			2.97
36	XB	4	PIRHONYOTHIN	12,000		6.93		6.93		6.93	5.92						
36	XB	4	PIRHONYOTHIN	5,800	5,800	4.51		4.51		4.51		4.51		4.51			4.51
37	SPC	4	BANG KHEN	20,480	20,480	3.16		3.16		3.16		3.16		3.16			3.16
37	XB	4	BANG KHEN	10,000	10,000	6.24		6.24		6.24		6.24		6.24			6.24
38	SPC	4	BANG SU	13,192	23,192	2.73		2.73		2.73		2.73		2.73			2.73
38	XB	4	BANG SU	10,000		6.24		6.24		6.24		6.24	5.65				
39	SPC	4	CHABNG WATTHRNA	20,288	20,288	3.15		3.15		3.15		3.15		3.15			3.15
40	SPC	4	DON MUANG	29,920	33,400	3.70		3.70		3.70		3.70		3.70			3.70
40	XB	4	DON MUANG	3,480		3.40		3.40		3.40		3.40		3.40	3.20		
41	SPC	4	INTAMARA	30,720	30,720	3.74		3.74		3.74		3.74		3.74			3.74
41	XB	4	INTAMARA	10,000	10,000	6.24		6.24		6.24		6.24		6.24			6.24
42	TC	4	LAK SI			6.00		6.00		6.00		6.00		6.00			6.00
42	SPC	4	LAK SI	32,768	38,768	3.86		3.86		3.86		3.86		3.86			3.86
42	XB	4	LAK SI	6,000		4.60		4.60		4.60	4.27						
43	SPC	4	LAT PHRAO -1	25,176	30,376	3.43		3.43		3.43		3.43		3.43			3.43
43	XB	4	LAT PHRAO -1	5,200		4.23		4.23		4.23		4.23	3.94				
44	SPC	4	LAT PHRAO -2	31,718	31,718	3.80		3.80		3.80		3.80		3.80			3.80
44	XB	4	LAT PHRAO -2	3,200	3,200	3.26		3.26		3.26		3.26		3.26			3.26
45	SPC	4	NAWA NAKHON	5,000	5,000	2.23		2.23		2.23		2.23		2.23			2.23
46	SPC	4	NGAN WONG WAN	26,591	31,891	3.51		3.51		3.51		3.51		3.51			3.51
46	XB	4	NGAN WONG WAN	5,300		4.28		4.28		4.28		4.28	3.98				
47	SPC	4	NONTHABURI	16,384	19,684	2.92		2.92		2.92		2.92		2.92			2.92
47	XB	4	NONTHABURI	3,300		3.31		3.31		3.31		3.31		3.31	3.11		
48	SPC	4	PAK KRET	18,336	18,336	3.03		3.03		3.03		3.03		3.03			3.03
49	SPC	4	RAM INTIRA	17,973	17,973	3.01		3.01		3.01		3.01		3.01			3.01
49	SPC	4	RAM INTIRA	7,168	7,168	2.36		2.36		2.36		2.36		2.36			2.36
55	SPC	4	BANG PHUN	5,120	5,120	2.24		2.24		2.24		2.24		2.24			2.24
56	SPC	4	PATHUM THANI	12,288	12,288	2.67		2.67		2.67		2.67		2.67			2.67
57	SPC	4	RANG SIT	15,360	15,360	2.86		2.86		2.86		2.86		2.86			2.86
59	SPC	4	THANYA BURI	6,400	6,400	2.32		2.32		2.32		2.32		2.32			2.32
			AREA TOTAL	426,426	426,426	122.90	0.00	122.90	0.00	122.90	10.19	111.37	13.57	96.61	6.31	0.00	89.91

2 - 31 Estimation of Necessary Staff in the Switching Maintenance Section (Surrounding Area)

No.	Type	Area	Exchange Name	Number of Capacity		1992	1993	1993	1994	1994	1995	1995	1996	1996	1997	1997	1997
				1992	1997	No. of Emp.	KB to SPC	No. of Emp.	KB to SPC	No. of Emp.	KB to SPC	No. of Emp.	KB to SPC	No. of Emp.	KB to SPC	No. of Emp.	KB to SPC
100	XB-PC	6	NAKHON PATHOM	3,000		3.15		3.15	2.93								
100	XB-ARF	6	NAKHON PATHOM	1,000		2.08		2.08		2.08	2.07						
100	SPC	6	NAKHON PATHOM	16,144	20,144	2.90		2.90		3.12		3.14		3.14			3.14
100	SPC	6	NAKHON PATHOM	1,024	1,024	1.99		1.99		1.99		1.99		1.99			1.99
100	SPC	6	NAKHON PATHOM	4,096	4,096	2.18		2.18		2.18		2.18		2.18			2.18
101	XB	6	SAMUT SAKHON	2,000		2.63	2.51										
101	SPC	6	SAMUT SAKHON	10,240	12,240	2.55		2.67		2.67		2.67		2.67			2.67
101	SPC	6	SAMUT SAKHON	1,024	1,024	1.99		1.99		1.99		1.99		1.99			1.99
101	SPC-Mc	6	SAMUT SAKHON	1,000	1,000	1.99		1.99		1.99		1.99		1.99			1.99
102	XB-PC	9	AYUTTHAYA	1,426		2.32	2.23										
102	XB-ARF	9	AYUTTHAYA	1,000		2.08		2.08		2.08	2.02						
102	XB-ARF	9	AYUTTHAYA	1,000		2.08		2.08		2.08		2.08	2.02				
102	XB-ARF	9	AYUTTHAYA	1,000		2.08		2.08		2.08		2.08		2.08	2.03		
102	SPC	9	AYUTTHAYA	16,256	20,682	2.91		2.99		2.99		3.05		3.11			3.17
102	SPC-Mc	9	AYUTTHAYA	1,000	1,000	1.99		1.99		1.99		1.99		1.99			1.99
102	SPC	9	AYUTTHAYA	2,048	2,048	2.05		2.05		2.05		2.05		2.05			2.05
			AREA TOTAL	63,258	63,258	36.97	4.74	32.22	2.93	29.29	4.10	25.19	2.02	23.17	2.03	0.00	21.14
			ALL TOTAL	1,591,546	1,591,546	524	34	488	33	452	29	421	30	387	25	10	356

ANNEX

CHAPTER 3 IMPROVEMENT OF CALL COMPLETION RATIO

3-1 Data of Figures in Subsection 3.3.1 (1/2)

1) Call Volume and Completion Ratio of Local, STD and ISD Calls

	Call Attem / Sub	Call Comp / Sub	Comp/Attem (%)
Local	3.45	1.31	38.1
STD	0.23	0.07	31.1
ISD	0.07	0.03	41.6
Total	3.75	1.41	37.7

2) Proportion of Call Volume of Local, STD and ISD Calls

	Call Attem / Sub	%
Local	3.45	92.0
STD	0.23	6.2
ISD	0.07	1.8
Total	3.75	100

3) Completion Ratio of STD Call to Each Level Code

Area	Call Attem/Sub	Call Comp/Sub	Comp/Attem (%)
"01"	0.078	0.019	24.4
"03"	0.086	0.027	31.5
"04"	0.020	0.008	38.0
"05"	0.027	0.010	36.9
"07"	0.020	0.008	41.2
"09"	0.002	0.001	30.8
Total	0.234	0.073	31.1

4) Service Performance of Cellular Mobile Call

	Call Attem / Sub	Call Comp / Sub	Comp/Attem (%)
TOT(470)	0.031	0.005	17.6
TOT(900)	0.047	0.014	28.8
CAT(800)	0.063	0.010	16.6
CAT(W.P)	0.027	0.010	36.1
Total	0.168	0.039	23.4

(Continued to next page)

3-1 Data of Figures in Subsection 3.3.1 (2/2)

Notes

The values shown above are average values measured as follows;

1. Measured switch

Commercial area PLOENCHIT-T3, PATHUMWAN-2, SURAWONG-4

Residential area BANGKAE, CHARUNGSANITWONG-2, PAKKRET

Mixed area SAMURANRAT-4, HUAMAK-2, LADPRAO-1

2. Measured days

4/20(Mon), 4/21(Tue), 4/23(Thur), 4/24(Fri)

3-2 Daily Traffic Pattern in the Number of Calls at Sampled Switches (1/9)

1. Ploen Chit-T3

(Average Value of 20,21,23 and 24 in April 1992)

Time	Originating Call	Incoming Terminating Call	Incoming Tandem Call	Total
0	2,942	1,965	6,843	11,749
1	1,770	1,348	3,905	7,023
2	1,111	894	2,223	4,228
3	656	698	1,682	3,036
4	507	598	1,498	2,602
5	796	752	2,371	3,919
6	3,102	2,240	8,629	13,971
7	10,747	6,814	24,550	42,111
8	55,145	37,519	115,486	208,150
9	122,555	82,568	262,236	467,358
10	131,709	111,013	272,411	515,132
11	111,461	78,019	210,861	400,341
12	48,251	31,519	79,121	158,890
13	97,517	66,193	178,082	341,792
14	110,736	73,125	200,111	383,972
15	108,370	70,562	193,415	372,347
16	100,334	63,932	170,820	335,085
17	57,696	34,797	84,148	176,640
18	34,244	19,598	55,958	109,800
19	25,417	15,367	52,914	93,697
20	20,822	13,731	52,520	87,072
21	16,039	10,028	45,809	71,876
22	11,283	7,292	32,100	50,675
23	6,547	4,195	16,198	26,940
Total	1,079,753	734,763	2,073,887	3,888,403